


# *The American Journal of* **CLINICAL MEDICINE** *Dependable Therapeutic Fact for Daily Use*



Vol. 21. No. 2

FEBRUARY, 1914

## Old Books That Carry Inspiration

THE president of a certain college once said to me that he would choose textbooks emanating from a man of genius or of commanding intellect rather than from one who was more orthodox in his view. His reason was his belief that in the work of a great man there was something inspiring, something calculated to arouse and develop the mentality of the student. That was forty-five years ago, and at that time and place the suggestion was rather startling, as that college was the focus of an orthodoxy of the most unyielding form. The impression which that remark made may be judged by my recollection of it after nearly half a century.

Many times since then I have had reason to recall this statement. Occasionally the medical profession develops a thinker, a man who dares to leave the ruts and to plume his pinions for a flight over the mountain peaks and up where the broad world and the broader universe are unrolled to his view. He throws off the trammels of professional orthodoxy, opens his eyes to see, his ears to hear, and his mouth to utter truths never before so much as whispered. Such a man does not wait until his views are fortified by authority. He shocks little people. He raises storms about his own head, but to which he pays but scant attention. He is talked about

and in time takes his place as one of the landmarks, the "authorities."

Many a medical work I have perused. Here and there one stands out as the work of a man of this sort—one who thought for himself and did things. Among the productions of the innumerable horde of compilers, these works show marked peculiarities. They are interesting—absorbingly so. They are denounced; but in time the ideas they present as innovations are blended with the mass of medical belief and impart to it a tinge of their own color.

Among such writers there were such men as Headland, whose "Action of Medicines" long stood as a huge rock in the bed of a river, breasting the current and turning it to either side; and Anstie, whose "Stimulants and Narcotics" was like breaking a bone again to set it better; and Fothergill, Richardson, Hilton, Frousseau, Bouchard, Lauder Brunton; yes, and I'll even include Haig! Even today, while some of the works of these great writers have become obsolete, you can not sit down and glance into them without growing interested and very soon finding some valuable food for thought.

The only modern writer I care to cite now is Metchnikoff. Frankly, I scarcely can read two chapters of his books in succession;

for, before the one chapter is finished some idea suggests itself to me and I have to stop reading and write it out.

Despite its age, I should start my student today on Niemeyer's "Practice" and keep him at it until he had mastered the clear, logical reasoning of this great German clinician. I should let him feed on Trousseau until he had learned to study patients; and not till then should he turn to the modern texts to get the advances in modern pathology and the helplessness of modern therapeutics.

Who knows when a modern master may appear? The possibilities may slumber under the hat of any one of the thousands of young men who have been impelled by some influence to enter the ranks of medicine. Give them the works of genius; they may, some of them, find in their own spirits something congenial.

Not the least attraction about such works is the opposition they encounter. Antagonism is the steel that strikes fire from the flint. It is the lure that attracts Youth, the "dare" that young manhood can never resist.

---

I will not be swayed by envy when my rival's strength is shown;  
 I will not deny his merit, but I'll strive to prove my own;  
 I will strive to see the beauty spread before me, rain or shine—  
 I will cease to preach your duty and be more concerned with mine.

—S. E. Kiser.

#### EMMENAGOGS: WHICH TO USE AND WHEN TO USE THEM

---

Several years ago a Wisconsin friend sent us a communication telling of the value of *satureia hortensis*, the summer-savory of our herb gardens, as an emmenagog. Of the thousands of articles published in our pages, few attracted such general notice as did this. The author was overwhelmed with letters begging for further particulars. Since *satureia* is but one of a well-known class of remedies, and one not particularly better than the others, we were impelled to the belief that to many of the profession the resources of the Pharmacopeia in the way of emmenagogs are not well known.

To begin with, why should we employ emmenagogs at all? Are there conditions wherein these uterine stimulants are legitimately indicated? Or is the urgent demand for these agents confined to women who have loved not wisely but too well, or, as a philo-

sophic friend puts it, more wisely than they realize?

Girls finding themselves pregnant though unmarried become temporarily insane in their terror and are ready to take any risk rather than face the world. We who have grown gray in the service know that nature will assert its rights and that she who does face the world eventually finds that the babe in her arms more than compensates for the shame. But she does not know this when she realizes her condition and in imagination sees the fingers of scorn leveled at her by every sister woman.

Anything, is her cry, to escape this. Tell her the truth, that there is no known drug that does not threaten the life of the mother before it reaches the child, and she instantly responds that she takes the chance, death being better than disgrace. Tell her of the sleepless nights she would spend if successful, bedewing her pillow with tears of regret and longing for the child she has destroyed—you are talking to her in a strange language, she does not comprehend its meaning.

Be careful! Two lives depend upon your tact. Send the woman away despairing, and you are likely to have her suicide to excuse yourself for. Lie to her, if you must, but keep her under your influence; hold her by any merciful expedient until the time comes when mother-love arouses to aid you and save the twain.

Recently I held in my arms the product of such a debased course of falsehood and dissimulation, deception, treachery, and, looking in the mother's eyes, I asked, "Is he worth a lie?"

"Millions of them," she exclaimed, clutching her babe to her breast with a mother-love expression on her face before which the angels in heaven would uncover their heads in reverence.

I repeat, there is no known emmenagog that can be given to a pregnant woman without imperiling her life far more than that of her unborn child.

Where, then, is the field for emmenagogs?

We take first the anemic types. Many women are amenorrheic simply because they have no blood to spare. They cannot afford to lose the red corpuscles, and nature protects them by preventing the flow. Yet, this is abnormal, and there may be a menstrual week of nerves, fidgets, shrewishness taking the place of the hemorrhage. Force the flow, and the patient is weaker, but more comfortable. The indication here is, to restore the blood crisis by *chalybeates*, nuclein, purga-

tives—and very often by vascular relaxants. For, in these cases quite often the blood itself is normally rich but not enough of it—the blood-vessels are contracted and do not hold enough. Give your iron and nuclein, but add a little veratrine.

"Veratrine! To an anemic?"

"Precisely." Please turn to your books and observe that veratrine relaxes vascular tension. That makes room for more blood, and that means better nutrition from more pabulum. Then veratrine enhances elimination and carries out of the blood the toxins that induce vasomotor contraction. Finally, veratrine energizes muscular contractions of the heart as well as of the voluntary muscle-fiber, and also allays the sensation of fatigue—probably by eliminating fatigue-toxins. I am speaking here of veratrine in proper doses, about 1 1-2 milligrams in a day.

During the menstrual week administer the direct stimulants—savine, rue, tansy, apiol or satureia—whichever you can obtain in the most reliable form. The volatile oils are best; but do not give too much of them. Small and oft-repeated doses do best. Look out for the kidneys—I am always uneasy when giving any volatile oil. I once gave a little juniper, and the urine increased; gave more, and it stopped entirely—and for two days I wore my hat on top of my hair, rather than on my head.

Or, you may safely give potassium permanganate, a centigram seven times a day—provided your patient is not tuberculous. Suppose she is. If you give permanganate, you may have bronchial hemorrhages, possibly fatal. But nothing you or I or anybody else may say will convince the patient that her amenorrhea is not the cause of the lung disease. Give her apiol then, with aloin, and cut out the iron. The encouragement afforded by a menstrual return is worth more than the loss of blood injures her.

Then we have the frigid type of anemic, the sexless worker-bee, shrewish, energetic, keen, intense. Why bother with her? Let her alone, unless she is married, in which case we should try to make a real woman out of her, for her husband's sake. To the chalybeates, and so on, add sanguinarine, a centigram at bedtime throughout the month. Sometimes we find undeveloped organs and she may need circumcision, or the development of some parts by rubber suction apparatus, or the application of echinacea.

The fat, flabby anemic needs iron, aloes, and senecio. In this class alone have I found Murrell's recommendation of the last-

named drug justified, and I surmise that this class is more common in England than here. But they must quit drinking beer. No uterine stimulants will have much effect if the vascular system is paralyzed by malt liquors. These women should be thoroughly scared into submission—and stoppage of the menses surely offers the tactful physician a sufficient opportunity.

The rarest form of amenorrhea coming to me is that in the plethoric. These patients usually respond to very small doses of apiol with aloin, although occasionally we do better with bromides. Restricted diet and graduated exercise help; in fact, the treatment of plethora is to be applied in full.

A knowledge of the part played by disease in the doings of the men who make history would reveal the secret springs of many actions which are not understood by the ordinary historian.—British Medical Journal.

#### THE GENERAL PRACTITIONER AS A REFRACTIONIST

We wish to call attention to the large field of usefulness and profit open to the general practitioner who will fit himself for eye refraction and undertake to do this kind of work, for, there is no class of medical work which for so moderate an amount of intelligence and care yields such uniformly satisfactory results both to physician and patient.

Unlike every other branch of medical practice, refraction is an exact science, and the precision of its results serves to establish in the patient's mind a feeling of confidence in the physician such as none of the less certain branches of practice can create. Nor is there any class of cases occurring in the ordinary routine of practice for which the same outlay of time and skill as large a fee can be charged and will be as cheerfully paid.

It is a thousand pities that the everyday practitioner has neglected and ignored this work. Unfortunately, the specialty of diseases of the eye has drawn away with it the simpler practice of refraction; still, there really is no good reason for the general practitioner surrendering this profitable class of patients to the specialists.

On the contrary, it is utterly impossible for the expert ophthalmologist to meet the requirements of the situation. The necessity of wearing glasses is more widespread than any other physiological need. Nevertheless the public, as a rule, declines—and very properly so—to go to the specialist for every pair of glasses needed in the family, espe-

cially if this involves a railroad trip to the city and often an exorbitant fee. Hence, their only alternative lies between the family doctor and the practical optician; but most people would, by preference, go to the former if he were equipped and ready to undertake the job. And every time the doctor is obliged to turn a case of this kind away he loses prestige, fee, and prospective business.

We repeat, there is no good reason, except that of the inexcusable "rut," why the general practitioner should not be doing optometric work. Everything else being equal, he is the proper and logical person to do it. He is entitled to it by every consideration of right and ethics, and ought to fit spectacles by virtue of his qualifications.

But there's the rub! For so many years the work of refraction has been regarded as foreign to the general practitioner's sphere that the medical schools have paid but scant attention to the subject, leaving it almost wholly to the postgraduate colleges, to which a man is supposed to go who wishes to devote himself to the specialty of the eye. The result has been that medical graduates have been turned out with practically no working-knowledge of refraction at all. So, the breach between them and this class of work has been widened until they feel themselves utterly unqualified for it, even though they might have an inclination to undertake it.

We urge upon our readers to take up this useful and profitable practice. It is, as we have said, a comparatively easy matter, especially for those who, like the physician, have already a scientifically trained mind. It is based upon a few simple, well-defined principles of optics, readily demonstrated and easily applied.

As to the details of the service, they need, in these days, be no more troublesome to the doctor than those of any other part of his practice. Even if there is not a dispensing optician in the town to fill the doctor's prescriptions for glasses, and if the latter does not care to carry a stock of lenses and frames himself, the facilities nowadays afforded by the large wholesale optical houses are such as to enable him to carry out this phase of the work with ease and promptness. All of these houses furnish their physician customers with catalogs and codes by which to order made-up goods, and a code telegram will, by return mail, bring to the physician's address the goods, nicely put up and securely packed, be it a small or a large order.

We purpose to do, through this journal, all in our power to promote this practice

among our readers and to help them to the performance of this work. We have made arrangements to publish in our leading columns a series of practical articles upon this subject, by an expert refractionist, that will give simple working-instructions for detecting and measuring errors of refraction and for the proper fitting of lenses for the correction of the same. These articles will be of an eminently clear, straightforward, practical nature, so that any physician, with his knowledge of the physiology of the eye, can readily learn from them how to refract.

At the same time we invite our readers to make of this journal the same clearing-house of information and assistance in this subject that they do in every other department of medical practice. Correspondence, queries, and calls for help on any and every phase of the work will be given the most careful and earnest attention at the hands of an expert. We are satisfied that there is here a large and fruitful field of effort and profit, and we shall do our utmost to cultivate it in the interests of our readers.

---

Of all mean businesses in the world, there are few, if any, more contemptible, more heartless or more economically vicious than that carried on by the man who enriches himself at the expense of the unfortunate consumptive. Of all tainted money, none is quite so dirty as the blood-toll collected by the "consumptive-cure" faker.—Journal of the American Medical Association.

---

#### DIABETES INSIPIDUS: IS THE PITUITARY BODY RESPONSIBLE FOR IT?

The more we learn about the ductless glands and their secretions, the more complex their functions seem to become. This is especially true as regards the pituitary, or hypophyseal, gland. An interesting addition to the field of speculation in this direction was recently made by Prof. M. Simmonds, of the pathologic institute of St. George's Hospital in Hamburg, who has traced a direct connection between polyuria and diabetes insipidus and the diseased pituitary body. This theory was developed in an address delivered before the biologic division of the Society of Physicians of Hamburg. (Cf. *Muench. Med. Woch.*, 1913, No. 3.)

We already know of the influence of the secretion of the anterior portion of the hypophysis upon the growth of the skeleton; it also seems established that the posterior half (the neurohypophysis), when diseased, may give rise to adipositas hypogenitalis—excessive fat production associated with undeveloped genital tissues; while the infundibulum, or neck



of the hypophysis, powerfully stimulates uterine contractions.

In addition to the diverse activities of that insignificant little anatomical structure—a gland-body until recently ignored as of no physiologic consequence—animal experiments conducted by the British physiologist Edward A. Schaefer have demonstrated that the so-called pars intermedia, the narrow middle section of this organ, elaborates a substance acting upon the renal cells and tubules as a diuretic; and, indeed, a connection between increased secretion of urine and lesion of the pituitary body (that is, in a general way) has been amply established clinically.

To be more specific, following Professor Simmonds's presentation, we knew: (1) that acromegaly and adipositas hypogenitalis not infrequently are associated with diabetes mellitus; (2) that gummous basal meningitis and tumors—any lesion affecting the hypophysis—sometimes engender polyuria; (3) that in the case of a man who had been shot in the head and soon afterward was affected with polyuria, the radiogram showed the projectile to be resting close to the sella turcica.

For all that, definite positive proof remains to be furnished to locate the exact division of the gland involved in the renal stimulation, corroborating in man what Schaefer has demonstrated experimentally for animals.

This needful proof Simmonds believes he has encountered in one human subject; and the facts related may briefly be summarized here.

The patient, a woman of 37 years, had carcinoma of the mamma. The breast was ablated, and the wound healed over nicely. Her temperature was normal. The urine measured about 1500 Cc. per day, had a specific gravity of 1012 to 1015, and was free from sugar and albumin. However, eight weeks after being discharged as cured the woman observed an enormous augmentation in the quantity of the urine voided, and began to experience intense thirst; these symptoms increasing, so that in two weeks more (ten in all) she presented herself at the doctor's office. She now was voiding from 10 to 19 liters of urine of a specific gravity between 1002 and 1003; yet, the liquid contained no traces of sugar or albumin.

Treatment practically was without effect, and the patient died. The necropsy revealed metastatic cancerous disease of the other mamma, of the liver, pleura, spine, and lymphatics of the neck, chest, and abdomen, as also of the skin. No other degenerations

were apparent—the medulla, entire brain, and particularly the kidneys appeared absolutely sound. However—and this is the significant fact—prompted by certain considerations, the hypophysial portion of the skull and brain were carefully separated, and the gland and bone were found diseased.

This is what microscopic inspection revealed: *The posterior bony horn of the saddle was entirely replaced by a cancerous mass; also, the neurohypophysis (the adjoining posterior lobe) also was carcinomatous throughout, this degeneration extending to and including the base of the infundibulum. However, the pars intermedia and the anterior lobe were in no wise affected.*

Upon these premises, Simmonds bases the conclusion that to the pars intermedia of the pituitary gland we must attribute the uropoietic activity observed as a consequence of pathologic conditions in that neighborhood. For, (1) the posterior lobe, being destroyed, must at once be excluded from consideration; (2) ample evidence to hand also eliminates the anterior lobe; (3) this confines us to the pars media, which in this instance was incited to overfunctioning through the adjacent cancerous lesion.

Now, in one way this explanation militates against the assumption of Schaefer that the secretion of the pars media enters the ventricles and circulation directly through the infundibulum, while here this outlet was completely obstructed. As to this phase, however, Simmonds sees no difficulty in postulating absorption of the gland product immediately into the lymphatic and blood currents. In view of all the facts presented, Simmonds enjoins every medical man to subject to a microscopical examination, in case of death, the pituitary gland in every instance of diabetes insipidus and of polyuria.

"Of what practical value," I hear you inquire, "is all this painstaking work. It may be interesting—but how will it help us to cure our cases of diabetes insipidus?"

The first essential in successful treatment is to understand what lies at the bottom. If diabetes insipidus is really due to some disturbance of the pars media of the pituitary body, then our chemists will begin work on that body—will break it up, reconstruct it, determine its exact structure; and, meanwhile, the pharmacologists will be ascertaining exactly how it acts. Take pituitrin, now used with so much success as an ecboic. Instead of being a single substance, it seems to be made up of eight different principles, four of them active, all differing in their action.

Eventually other portions of the pituitary gland will be studied with the same care, and as a result we shall learn how to increase its functional activity, and how to depress it. And the time will not be long before these things will be done.

We live in a time of tremendous activity in the research-world. Our problems are being solved with a rapidity that at times almost makes us hold our breath.

---

Oh, on my blinded groping way  
 Vouchsafe the joy that by my path  
 I leave from day to day more smiles  
 Than broken hearts, and fears, and wrath.  
 My eyes are weak to see the cause  
 Why Thou dost let the wicked thrive!  
 My heart is prone to jealousy;  
 Vain thoughts against my judgment strive.

—J. Otis Swift.

## TWO TYPES OF DOCTORS CONTRASTED

Isidore Lamars always had been a good boy; so good that his aunt left him the income of ten thousand dollars. Isidore decided to become a doctor. He was a model student, always knew the right answers, made beautiful dissections, and his laboratory records were the show pieces of the school. He studied summer and winter and, having a facile mind and retentive memory, knew his textbooks by heart. He never looked into any other book. He was graduated at the head of his class and passed the state-board examination with flying colors.

Adam Bean was the son of a blacksmith. When he told his father he wanted to be a doctor, the father kindly gave his son his time. Adam supported himself at college by doing all sorts of odd jobs; washing dishes for his board, doing janitor work for lodging and college fees. Saturday afternoons and Sundays he helped in a drugstore, and after his first year he took charge while the boss ran out to his family's summer home. During vacation, Adam sold books, sawed wood, tended horses, mowed lawns, made garden, did farm work, did any and every thing to make a dollar, yet, somehow could never land any job except one that entailed hard work for the lowest pay.

Adam rarely looked in his textbooks—too busy or too tired. When he had the time he was always helping some doctor operate, going to clinics, dressing at the dispensary or doing something that had little bearing on his lessons. He rarely answered well at quiz, but was apt to get into a discussion instead of

giving the correct answer. At graduation he stood at the foot of his class and barely squeezed past the state board on a second trial.

Isidore faced the world with \$600 a year. He took an office, in which he slept, and lived on his income. He had no money for journals and read none. They mixed things up too much, treating of things not mentioned in textbooks.

Isidore was orthodox and ethical to the core. He never went to church, for fear he would be suspected of seeking practice; never took part in anything of public interest, for he was strictly and only a physician and knew nothing outside his profession; he never spoke unless he was addressed, for he was no buttinski; never acknowledged the salutation of "Doc," for he felt the necessity of keeping up the dignity of the profession; never made a second visit unless requested; always insisted upon turning over his emergency-cases to the regular family doctor, for he was Ethical; never bought any new books or apparatus, for he had no money, and he never investigated any new things, for he waited till the Council had approved them.

Isidore soon became old-fashioned, having an unmovable belief that the textbooks he had studied contained all that was worth while. He got seedy and queer from isolation. The world swept by him.

Adam had no money to rent an office, but he got a job as assistant to a doctor, caring for his horses, cleaning the office, tending furnace, assisting in operations, making night calls, attending charity-cases, and making himself generally useful.

He made good. At the end of a year the doctor took him as a junior partner. Doctor got tired of practice and interested in his farm; took more and longer vacations, left more work to Adam, and finally sold him the practice for a yearly payment. The patients made no kick.

Adam was known to every barber-shop, cigar-store, and livery-stable as "Doc." He hadn't any dignity to keep up. He could laugh like a horse over a funny story and trade horses with David Harum. He never heard men discussing anything but he mixed in. If he knew anything about the matter he said so, if he didn't, he asked questions. He went to church, to lodges, to primaries, and everywhere he made himself known, pushed in and asked for a chance. He raised a commotion over the garbage collection; another over the water supply; a third over the filthy streets; and made himself ob-

noxious to everybody who loved peace and quiet.

It was not long before he found that the methods and remedial measures he had been taught were inefficient, so he looked about for better ones. He took lots of journals and read them; and every new idea that came up he considered and, if it sounded plausible, gave it a trial. He went to every society meeting in reach and pestered every doctor he met to find out things the other man knew and Adam did not. His office was cluttered up with apparatus which he bought constantly, though much of it went to the scrap sooner or later. He was the first man in town to have an automobile and got the reputation of being the quickest to get to an emergency-case.

He never had any money, because there were so many new things coming out that he had to try. Every quack method that became prevalent he investigated, to see what might be in it, following the line of the evangelist who didn't see why the devil should have all the good music. His ethics were looked upon with suspicion or derision, for he was a sure-enough buttinski. But he never did a dishonorable act or spoke a word in detraction of another doctor. He became the busiest practitioner in town and one of its most useful and influential citizens. He went into politics up to the limit, but never had time to take office—might have gone to Congress, but couldn't leave his practice.

One day Adam drove along a quiet back street and on a shabby little cottage he saw a shabby little doctor's sign. Possessed by a sudden curiosity to know who he might be, he jumped out of his auto and ran up the walk and read there, Isidore Lamars. He rang the bell. Isidore answered—a shabby little man, diffident, old-fashioned. Adam greeted his old classmate heartily, asked him bluntly his circumstances, took his arm, pulled him into the auto and whirled him away to the business center. Isidore had hardly seen it for years.

Adam took him into his fine suite of offices and showed him a laboratory newly fitted with the latest and best of everything needful. He explained that he had to have a man to run it for him and told Isidore to take charge at once, naming a sum far above his present income—which was but little in excess of the interest on his legacy.

Isidore hung back, but Adam overruled his weak objections and told him to go to work. He found he had grown rusty, but the newest books were there and soon he found himself

enjoying the work and picking up the threads. After all, he had led a clean life, and his faculties had merely gone unemployed.

It was not long before he began to pick up some of Adam's energy. At first he questioned the ethics of Adam's pushing methods, but Adam took him by the shoulders, looked him squarely in the eyes and said:

"Be honest. Don't hurt your fellow men. Then forget yourself and think how you can help those who need it. That's ethics enough. Study the new things. Don't wait for the Council, however worthy the men may be. Neither they nor any other set of men know it all. If there's good in reach, your patients need it, and it's up to you to give it to them. You can't delegate your duty to any other man on earth."

It was not very long before Isidore found his place—a useful cog in Adam's machine. He came in touch with suffering humanity, and his outlook widened. To be useful seemed more important than to be orthodox; and he learned to fear losing a chance, which meant a human life, more than he dreaded to make a mistake. Under Adam Bean's tutelage, Isidore Lamars bids fair to redeem the promise of his college career.

---

Neglecting to use your strength turns that strength into weakness.—James A. Worsham.

---

## THE TONIC EFFECTS OF SEDATIVES

---

An old physician once said to the writer that he made use of no remedies except tonics. His argument was, that nobody applied to the doctor unless he were sick, and if sick he necessarily was weaker now than when well.

This is a fair example of that specious reasoning that looks only at the surface, and does not go into the real merits of a question. It reminds one of the amateur philologist who, finding that the Hebrew verb *kophar* means "to cover," jumped at the conclusion that the Hebrew and the English were identical. A little historic research would have shown him that our word cover came to us from the older word (old French) *couvrir*, older form *coprire*, and this from the Latin *cooperire* (*con* and *operire*, root-word *opus*; which latter has little resemblance to the Hebrew verb *kophar*—and Hebrew was a completed, crystallized, dead tongue centuries before Cæsar first saw the white cliffs of Albion.

Tonics may be divided into two groups—nutritives, or foods, and astringents. The

latter may, indeed, overcome relaxation and "take up the slack"—a strictly temporary expedient, though, as shown by the fact that not one of those agents can be given as a tonic for longer than a month. Prolong this period, and debility follows. Even iron given too long exerts a hemolytic influence closely resembling that from mercury.

It could not be otherwise, since astringents contract the walls of the blood-vessels and by lessening their lumen cut down the supply of blood to the area of their distribution. In-nutrition, therefore, is a necessary concomitant of the action of tonics.

On the other hand, study the effects of the vasorelaxant group, the so-called sedatives: aconitine, veratrine, gelseminine, cicutine, and possibly sparteine. By relaxing the tension of the arteries, these receive and transmit a fuller volume of blood and thereby enhance the nutrition of the organs.

It is true these agents weaken the force of the heart's pulsations, but in the doses usually employed the relaxation of vascular, and especially of arterial, tension is greater than the weakening of the cardiac impulse. Consequently, the circulation is freer, a larger blood supply is sent into the capillaries, and nutrition is improved. Moreover, one of these agents, veratrine in small doses, increases the strength of the contractions of the heart-muscle as well as of the voluntary muscles.

The bad reputation of veratrum as a very dangerous sedative rests wholly upon its effects in poisoning cases where very large quantities had been ingested. Had this drug been studied from the standpoint of physiologic experimentation, veratrine would have been ranked among the tonics. Instead, it now is a legacy to therapeutics from the domain of toxicology.

The accomplished therapist applies his remedies as the woman coiled the crooked sticks about the kettle—availing himself of the peculiarities of each in little, medium, and big doses to secure the action needed in his case. With the marked power of increasing elimination possessed by all vasorelaxants (sedatives), there are many instances in which truer and better "tonic," or, rather, nutritive, or roborant, effects can be secured by the use of these remedies than from all the bitters and stimulants and astringents in the list.

Though not quite in line with the foregoing, the example that persists in obtruding itself upon my consciousness just now is the use of veratrine to induce sleep when insomnia is due to abnormal vascular or mental tension.

Three granules at bedtime, in a small glass of water, will ensure a restful sleep, even in a man so feeble that he can not walk a mile.

I have often called attention to the extraordinary value of digitalin in insomnias due to vasorelaxation and cardiac weakness. Then the patient is somnolent while on his feet or sitting, because the feeble heart with difficulty elevates the blood to the brain; cerebral anemia induces sleepiness. But when the patient assumes the recumbent posture the flabby cerebral vessels are unable to resist the inrush of blood from gravity, cerebral hyperemia ensues and sleep is impossible. A little digitalin corrects the vasorelaxation and natural sleep follows.

Neither veratrine nor digitalin is a hypnotic. Each induces sleep by correcting the pathologic condition that causes the insomnia; and natural sleep is one of our vitally important agencies for restoring health.

But, how *can* a physician neglect these considerations and prescribe morphine or one of the chloral succedanea for both of these conditions, ignoring their diametric antagonism?

---

"Is the young man all right who is going to marry your daughter?"

"I have every reason to believe so. He has been audited by the audit company, assayed by the local chemist, tested by the state bacteriologist, certified by the genealogist, and appraised by the medical and surgical staff of the county hospital."—*Life*.

Respectfully referred to Wisconsin physicians.

---

#### DIAGNOSE AND TREAT DIPHTHERIA EARLY

---

When the subject of serums is under discussion, and especially when their practical value is in critical question, we usually "point with pride" to the record made by antidi-phtheritic serum. And justly so, for of all the serums thus far offered for the cure of infectious disease the antitoxin of diphtheria has best vindicated our reasonable faith in this biologic form of therapy. Indeed, it may be safely said that whenever the antitoxin is given a clear stage and a fair show against the Klebs-Loeffler invader, the outcome of the battle is practically always in favor of the defending force, and therefore favorable to the patient.

Even so, the mortality has not yet been altogether reduced to nil. There still remains a small percentage of these cases which seem to defy even our modern weapons of repulsion, baffle our efforts at defense, and leave us staring blankly and helplessly on a death-

swept field of utter defeat. It is, of course, too much to expect that we shall ever completely and invariably conquer this or any other disease during its course. By preventive measures we may, perhaps, hope to wipe it out of existence some day. But so long as the disease lasts at all there will always be a certain number of cases which, for various unavoidable reasons, will out-play our resources; and this inevitable element constitutes a part of the percentage of mortality that still mars the record of our battle with diphtheria.

It does not, however, account for it all. When due allowance has been made for the inevitable factor, there yet remains a modicum of unreduced mortality which is not inevitable, but which admits of further reduction, if we will but gird up our loins and put our shoulders a little more strenuously to the task. A certain proportion of diphtheritic patients, it must be confessed, die because of failure to diagnose the disease and apply the remedy in time to profit by the aid of the almost specific serum.

It is to be borne in mind that no serum (and the same may be said of antitoxins and antiseptics in general), however potent or specific, ever completely routs the invading germs and their deadly toxins. The most that it accomplishes, or can be expected to accomplish is, to subtract, by neutralization, a sufficient quantity of toxic material to give the hard-pressed defending forces the balance of power. The marked success of diphtheritic antitoxin must, in net terms, be attributed to the fact that, in quantity and quality, we are able to afford sufficient neutralization to insure the body defenses a good big margin of power. There are also good reasons, which need not be gone into here, for believing that the serum exerts also a certain degree of vaccine influence upon the opsonic mechanism.

Bearing this in mind, it becomes at once apparent that *pari passu* the success of the antitoxin treatment of diphtheria is directly proportionate to the earliness with which it takes the field. It is manifestly much easier to gain, and thereafter to keep, the balance of power against an invading force while as yet it has not obtained any extensive footing. And whatever stimulative, vaccine action the serum may exert is obviously much more effectively exerted while yet the opsonic mechanism is fresh and unexhausted.

The crux of the treatment of diphtheria, therefore, is early diagnosis and use of the antitoxin. It is not a matter of days, but of

hours. We must bear in mind that the blood is the seat of a desperate and close fight and that the least delay in bringing up reinforcements may, and indeed is almost sure to, turn the tide of battle. Fortunately, there need be no such delay for want of facilities to make the diagnosis and procure the remedy. Hardly any physician, in these days, but is within easy reach of a culture laboratory, either private or public; and antitoxin is nowadays supplied in convenient and preservable form for use when needed. We do not commend the practice of waiting until the emergency arises before ordering the serum. The much more excellent way is to provide oneself with a good, reliable, keepable serum, which will be at hand for prompt use when the emergency arises.

Which raises one other point. No inconsiderable factor in successful serum treatment is the quality of the serum; intrinsic purity and potency, first, and, as a secondary and by no means unimportant feature, the degree of soluble concentration, since the nature and action of a serum render its clinical value in direct proportion to the concentration of its solution. Readers of CLINICAL MEDICINE do not need to be told where such desirable antitoxin can be obtained. *Verb. sap. suff.*

---

The latest definition of an optimist: "One who can cheerfully fletcherize his own quinine pill." Don't be a grouch!

---

#### INSPECTION OF DOCTORS' OFFICES

---

Well, what do you think of that? Wouldn't that jar you? Recent amendments to the sanitary code of the state of Louisiana provide for the inspection of physicians' and dentists' premises, and a scoring-card system similar to that used in the inspection of dairies and tenements. When the score falls below fifty points, charges of infraction of the code are to be made. Among the points to be graded are: "freedom from bad odor," "personal appearance of attendant," "personal appearance and breath of person in charge," "presence of electric fan and library," "general neatness," and "sanitary condition." Of all the consummate, bare-faced, unmitigated cheek! Why, it's an outrage, an insult! It's—er—er—

Aw, come now, fellers, don't let's get sore. Haven't we been inspecting and legislating and regulating everybody and everything under the sun on the score of cleanliness and hygiene? And isn't it only fair that we take a little of our own medicine? Let's take it



like little men; gulp it down, if it is a trifle bitter, and admit that we were a little below par, and needed a gentle tonic.

Honest Injun, doctor (this is the New Year, and a proper time for open confession, at least among ourselves), are we such paragons of virtue in this respect that every class of men under heaven needs prodding up on the subject except us? While we are making such a hullabaloo about the condition of the streets of Jerusalem, is it quite sure that each one of us is keeping his own doorstep clean? Are there no beams in our own professional eyes that occasionally call for removal, that we may see clearly to take out the mote that is in our brother's eye? Nay, we may go a step further, and question whether all the offices and laboratories of the boards of health themselves always present that exemplary state of orderly, cleanly perfection that might be expected from the apostolic repositories of hygiene and sanitation.

You, of course, dear doctor, have nothing to fear from the enforcement of such a code, should it become general. And think what a capital thing it would be for the other fellow. You yourself are above reproach in the matter, but your neighbor—! He is a careless, slovenly, untidy, sloppy, slipshod chap, really not any great credit to his profession. His hands are always dirty, his person untidy, and his manner uncouth; his office does not make a very inviting appearance, to say the least; his office girl is constantly chewing gum and fixing her hair; altogether, he and his quarters are not just the sort of man and place to which you would care to send your wife or daughter. And, while you don't wish him any harm, you really would enjoy seeing the code inspector swoop down on him some morning and give him a little jolt.

I believe you, doctor. Only—take a little tip—take just the least perfunctory glance around your own place when you see the inspector coming down the street, for fear there may be some trifling, accidental oversight that will give him an unreasonable handle against you.

Joking apart, though—as the salesman said when he returned to the prospect's office after being kicked out of the window—joking apart, there is a serious and timely lesson here, quite irrespective of the Louisiana State Board and its code. We need to take to heart the lesson of personal cleanliness and hygiene which we are forever preaching to the layman, or the pupil will outstrip the master in the very things that the latter is teaching. Perhaps even now the average layman is more

scrupulous in his personal habits and his entourage than the average physician. Perhaps the averages are about even. But they ought to be more than even. There are a hundred reasons why the physician, in his own proper person and in his points of contact with other people, should be more than ordinarily punctilious in matters of cleanliness and sanitation, both physical and moral.

A month or two ago we made a plea in these pages for a pleasant, esthetic, even artistic treatment of the doctor's office. We now enter an equally earnest—yes, an even more earnest—plea for wholesomeness, neatness, sanitariness to extend from the doctor's own person to everybody and everything in his professional environment and to breathe through the very atmosphere, physical and moral, with which he surrounds himself.

Cultivate the smile that won't come off; keep in mind that a flicker of a smile is worth a whole menagerie of growls. A smiling face and gentle manners not only pay from a business standpoint, but add untold amounts to the sum of good-will among mankind. A grouch or a growl never got a new subscriber or won a new advertiser. Correct habits, sufficient sleep, and a good digestion—which mean, sensible, temperate living at home—produces genuine good humor.—Arthur Capper.

#### FEDERAL LICENSURE OF THE PHYSICIAN

We are not surprised to see that someone has introduced a bill in Congress designed to create a federal board for the purpose of licensing physicians to practice medicine in any state or possession of the United States. For several years there has been a growing feeling of dissatisfaction with the present conditions governing state licensure, and a simultaneous demand for some form of procedure that would universalize the legal qualifications of practice throughout the country; a demand which was bound, sooner or later, to take shape in some action of this kind.

However, we fear that Representative Reilly's bill does not offer a feasible solution of this important problem. The creation of a federal board has been a pet obsession among the more radical element of the advocates of reform for a number of years; and, indeed, if it were practicable, it would, in many respects, be an ideal arrangement. At least, that is our opinion. Others may question its desirability.

Fortunately, though—or unfortunately—such national control is quite impracticable, if not actually impossible, under our present form of government.

The regulation of the practice of medicine, it must be borne in mind, is an exercise of police-power; and under the constitution of the United States the federal government is not invested with any police-power except for the District of Columbia. Hence, Mr. Reilly's bill is in the paradoxical position of invoking on the part of Congress a power which that body does not possess and, under the constitution, can not acquire.

In order to open the way for a bill of this nature to become a possibility, it would be necessary first to change the federal constitution; and we doubt very much whether the country is prepared to take so serious a step on comparatively so small a pretext.

Just the same, the grievance and the need for a remedy, of which the bill in question is an expression, are very real and urgent, and this subject ought to receive the prompt and earnest attention of those who are charged with the administration of the public aspects of organized medicine.

There are more ways of killing a dog than by cutting its throat; there are more ways of taking a rampart than by a frontal attack—many better ways surely can be devised when it is a foregone conclusion that a frontal attack is hopeless.

So, although the possibilities of remedying the present situation by the creation of a federal medical licensing board manifestly are nil, it does not follow that there is no practical and effective way of dealing with it.

One way of getting at the matter would be the organization of some form of commission or general board, as between the various licensing states, this to act as a clearing-house of requirements and qualifications and executive administration; not, of course, to supersede the individual functions of the several state boards within their own respective bailiwicks, but to supplement them in matters of interstate relations. To be sure, an effective working-agreement among the personnel of such a board, each man jealously guarding what he regards as the best interest of his own state, would involve some difficulty; but it by no means would be impossible.

The appointment of one representative by each state—preferably by the governor, under proper advice—would give the necessary weight of authority to that body. And, further, if a member of this interstate board were to hold no membership in the respective state board; if he were given plenipotentiary power to act for his state in purely interstate matters; and if, moreover, he were thor-

oughly instructed and imbued with the idea that his business was to promote interstate rather than state interests; upon these premises, we believe that much of the friction would be eliminated from the beginning and the way opened to an effective, practicable cooperation between the states.

It goes without saying, of course, that such an agreement could not be reached at once; but with plenty of time at their disposal, and absolute freedom to thrash out, on an open floor, all the questions in issue, it would be a hard situation if such a group of men, all honestly and earnestly striving for an advantageous compromise, could not reach some common ground. At all events, there is no inherent impossibility in the thing, such as there is in all attempts to enact federal legislation upon the subject; and it seems at least worth trying out.

Personally, the writer believes that a still more radical step will be necessary effectively to resolve the situation, namely, the complete separation of the educative from the civic phases of medical-practice regulation. To prescribe the educational qualifications that shall be considered as fitting a man to practice medicine, is one thing; to stipulate the conditions under which he shall be permitted to practice in the community, is a different proposition.

The best possible agency for carrying out the first, it would seem, is the profession itself; the other is distinctly the function of the State. In England, this is precisely the condition of affairs which, in effect, prevails. There, the commonwealth does not meddle in any manner with the question of technical qualification; that is left entirely to the General Medical Council. But it does dictate the terms upon which a man may practice as a qualified physician, using the regulations of the General Medical Council as a basis for its stipulations.

In our own country, the same thing is done, but in a clandestine, indirect sort of way. The State is obliged, in the end, to rely upon the profession itself for the stipulation of educational qualifications. It would be far better, in our opinion, to have that part of the system frankly and wholly relegated to the profession, leaving the State to look after the civic application of this and other principles involved.

Whatever is to be done, however, ought to be done, and done quickly. The need, as we have said, is real and urgent. The rapid development of interstate relations within the past twenty years has rendered the yoke

of local restriction intolerable and absurd. The situation is an impossible one. A system of regulation which makes a man an honorable practitioner of science on one side of an imaginary boundary-line and a criminal law-breaker on the other side is as stupid as it is irksome, and justly makes us the laughing-stock of those who stand by and witness it; to say nothing of the hardship and injustice it inflicts upon medical men who wish to change their residence or their place of practice. There ought to be some way of solving the problem without running our heads against the stone wall of the constitution.

---

The thoughts that rain their steady glow,  
Like stars on life's cold sea  
Which others know, or say they know—  
They never show for me.

Thoughts light, like gleams, my spirit's sky,  
But they will not remain;  
They light me once, they hurry by,  
And never come again.

—Matthew Arnold.

#### A WORD ABOUT "BREAKING UP" COLDS

We shall have to revise our old views about catching cold. Here we have been stopping in a summer cottage, a little snow outside, with temperature falling at night below freezing; cottage very open, no heater except an oil-stove; yet, we have had no colds. In the city, going on the cars to the office, sitting in a warm room till time to go home to a warm house, we have never a day without sneezing, and sometimes it develops into a cold. Here we work hard, cutting, chopping, sawing, brushing, but have no colds.

Evidently it is not cold that causes colds. Then what is it? Germs.

The germs infest our warm rooms, lying in wait for the moment of vital depression that lowers resistance and permits a successful assault upon our fortifications. Cold checks the activity of microorganisms and, with moderate outdoor exercise, increases our resistance. But even here the boy takes cold, and in this way: Circumstances: fatigue, disappointment, very little food and that not hot, drenched body and feet, with no chance to change, for the best part of the day. Result: headache, fever to 102+ degrees, head hot, feet cold, shivering. Diagnosis: germ invasion under depressing conditions.

Now as for rational treatment. As a germicide, 8 grains of quinine sulphate (the boy is 14 years old). To equalize the circulation, three granules of the matchless defer- vescent compound, containing aconitine, digitalin, and veratrine. Rest in bed, boy warmly wrapped. The boy slept less than two hours and awoke—well. No fever, headache or other symptom; hungry for his supper.

The rationale of the action of the defer- vescents here is interesting. At sea, oil is spread over the water, to quiet the waves; the explanation being that the film of oil prevents the beginning rise of the wave; and if there is no beginning there will be no wave.

Here, the aconitine relaxes the spasm of the cutaneous capillaries, allowing them to open up; the blood flows from the hyperemic regions into the relaxed, patulous vessels, and the hyperemia subsides. When there is no hyperemia, there will be none of the succeeding steps—the diapedesis of white cells, rupture of vessel-walls, escape of blood into tissues, and all that.

At the same time digitalin is contracting to normal lumen the dilated vessels of the engorged areas, gently pushing the surplus blood out into the relaxed capillaries—a most beautiful example of that selective action of the cells we have discussed before; a fact which Virchow, the master of cellular pathology, recognized long ago.

Veratrine is added to the combination to get quicker and stronger relaxation, and to stimulate elimination, because the boy is a boy, his pulse strong, the cerebral hyperemia decided.

Here we meet the symptomatic and the pathologic indications with prompt and powerful remedies; and we abort the attack so completely that relief occurs within two hours. Next morning the lad shoulders his ax and keeps up his end of the work all day.

Usually we can abort an incipient coryza by small and oft-repeated doses of calx iodata—if we take the trouble. But sufficient attention has not been given to the action of this defer- vescent combination or to the conjoined use of quinine. Colds entail so much annoyance and interfere so sadly with the serious business of life that they and their abortive treatment are well worth more study than is accorded them. We dislike much to hear a doctor use the phrase, "Only a cold."

# Leading Articles

## Out of the Shadow

*How a Missouri Banker Conquered Tuberculosis Out in Colorado*

By J. L. WOODBRIDGE, Fowler, Colorado

*EDITORIAL NOTE.—This article was not written by a physician, nor was it intended primarily for physicians, but rather for the thousands of unfortunates who carry within their bodies the germs of a disease as deadly and as sure as the bullets of a Mauser rifle. Neither is it intended to give the physician instruction in the art of treating tuberculosis. It is intended, however, to show what can be done by the patient himself when heart and soul and body combine to fight for life, under the direction of an able, conscientious doctor.*

**I**T WAS on Christmas day of the year 1905 that I received my first jolt. This occasion is well scorched into my memory. Most of the children had come home to spend the holidays, back in Marshall, Missouri; everything bright and happy—only one drawback. At about noontime I was taken with fever! The family physician was called, and he did about the only thing that could be done—left some medicine to reduce the temperature. Had I but known then of the long years of trouble before me, just beginning, how much of it all could have been saved!

The fever abated, then came back again, intermittently, unexpectedly, till it got to be a pretty regular thing; and always in the afternoon, leaving about six o'clock, just at supper-time. Then two more things happened. My hearing began to fail. I had, for twenty-five years, had crippled ears, a great handicap to a banker. Under the best of aurists, my hearing had held pretty steady, and they had assured me that this condition depended entirely upon keeping up my general health. As I began losing weight my hearing weakened and waned. Besides all this, my nervous system showed ugly symptoms, until every afternoon I had to take a strong strychnine tablet to hold me steady and clear for business purposes.

When spring opened I got a hoe and went to work in my garden, to build up my strength. Do you get that? To build up my strength, mind you! And after an hour of that exercise, in the cool of the evening, I would go to the bath-room to sponge off, my clothing soaked with perspiration, the result of exercise under weakness. Without knowing it,

I was working and sweating off flesh worth a thousand dollars a pound to me. You sick man, listen to that! If you are doing as I did, drop that hoe, right here, and go lie down on your back and rest. Rest!

I am not a warm advocate of violent exercise, anyhow, for the well man who leads a sedentary life. The days of J. P. Morgan were prolonged ten years by his wise physician, who told him, at a breakdown, to take not one unnecessary step; not to walk even a block, but to take a cab. Chauncey M. Depew said he was fifty before he found out it was not exercise he needed, but fresh air.

The whole of the following year was one of a losing struggle, the doctors hunting me over, the aurists fighting for my ears. In September, I took a vacation in Colorado, but not long enough to be of permanent benefit. My physician, one of the noblest men and best doctors I ever knew, was treating me to hold my digestion good, and was watching my physical condition closely. By his advice, my sputum was examined by an expert, but no tubercle bacilli were found. True, the streptococcus, which accompanies tuberculosis, was there, but, as that is present in a hundred other diseases, it proved nothing.

### The Danger of Inconsiderate Consumptives

What I shall say now is with the hope of benefiting suffering fellowmen. Among the directors of our bank was an old retired professional man. As I see him now in my mind, I know he had tuberculosis. I did not know it then. My physician evidently did, for he told me that the presence of this old man was a menace, not alone to me, but

also to every employee of the bank; for the man had nothing to do and most of his time sat about the premises as his loafing place. I went to several of our directors and canvassed the grave situation, asking relief. Of these men, only one had the moral courage to approach the old gentleman and frankly tell him of the danger to which he was submitting us all. But he proved to be as obstinate as he was selfish, said he had no consumption and refused to make any change in his habits.

If I had only known what I do now, I should have resigned from the bank right there, though the mischief was really done. The old man afterward admitted he had had consumption for twenty years, but that "he hadn't given it to anybody yet." In less than one year from that time he was dead from that disease.

Now, in this land today, I venture to say there are thousands of instances just like the one related; tuberculous people working side by side with others—heads of families, delicate women and young girls. Legislation is not far enough advanced to require boards of health to act in such cases. But I want to say, with all the emphasis in my power, that for owners or managers of business concerns to permit such a condition to exist is but little short of a crime.

This is not said with a lack of sympathy for the poor stricken victim; I was one of them myself. But I will say right here that from the moment I was told of my true condition I isolated myself as far as I could and lived almost alone. I did not go to church or public gatherings for years. I felt I had no right uselessly to imperil the health of innocent people.

#### The Recrudescence

During the following winter my fever abated, but my hearing grew steadily worse. Then, seeking a mild, dry climate, I went to El Paso, Texas, for a short stay. There, the fever again set in. I consulted Dr. John Beckert, who had been recommended to me; an up to date physician out of Washington University, Saint Louis. He examined me thoroughly, and also examined my sputum, but only with the same result as before. However, he went further than the other doctors and told me that if that fever kept up I had better get out of Missouri as soon as possible. And I wish I had taken his advice right then.

After the late cold spring of 1907, during which I continued to lose strength steadily

under that persistent fever, I told our bank-people I should go to Colorado for a stay immediately after our midsummer stockholders' meeting that was to take place in July. The Bank of Saline, at Marshall, Mo., was a solid, prosperous institution, with over a quarter of a million assets. I had been its cashier, and a director for eleven years. At the meeting of the directors, following the meeting of stockholders, they saw fit to elect me president of the bank.

That evening I closed my desk at six o'clock, with everything in shape for a three weeks' absence on my vacation, or rest. Little did I think, as I locked the door of the bank, that my long business career in Marshall and in Saline County, Missouri, was forever closed, after thirty-five years of hard, steady work in banks, in every capacity, from book-keeper to president, and that I was permanently leaving my old home of nearly forty years, where I had lived, married and reared a large family. For I have never seen the place again.

The next morning, with my wife, I boarded a Chicago and Alton train for Kansas City, on the way to Colorado; the place where I was to make my fight for life and which, in the future, was to be my home.

Memories of those dark days stick close to me. I well recall the last day I spent in good old Kansas City at the home of my son-in-law and daughter, Mr. and Mrs. John B. Wornall. And how, the next day, when we arrived at Union Station, Pueblo, friends and relatives were there to meet us.

I was in a weak condition, but kind hands and hearts ministered to me. I have often read of the cold reception consumptives (or "lungers," as they are flippantly termed) meet with in the West. It may be so in some instances; probably it is. You cannot blame people for that. I certainly do not. Nobody can be censured for not wanting infected strangers indiscriminately about, and doubtless the reluctance to receive the afflicted into the boarding-houses has had something to do with the charge laid at the door of the western folk.

As for myself, I have encountered no treatment of the kind. On the contrary, people have been uniformly kind, helping me in my helplessness; for I have never hesitated to declare the nature of my illness, as some people seem ashamed to do. The debts of gratitude for this have piled up against me so large that I can never hope to liquidate



them in this world. Without the friends I have had, I could not hope to be alive today.

#### The Truth Is Revealed

My own son, Dr. J. H. Woodbridge, then and now in practice in Pueblo, was to be my physician. After a day or two of rest, he took me to his office, stripped me and gave me a thorough examination. The result can be summed up in his own words about as follows:

"You have tuberculosis. I have located it already in at least one spot, the top of the left lung. It shows on you in other ways. Look at your pale finger-nails and ear-lobes. You have lost much flesh, your muscles are soft and flaccid. I shall send you over to Doctor Inglis, to examine you also. You cannot hope to return to Missouri for three months. At that time I may be able to tell you whether you may go back at all or not."

Dr. John Inglis was a physician of repute and ability; then of Pueblo, now of Denver. The finding of his examination was worse than that of Doctor Woodbridge for he reported another infected spot, in the right lung. He said I should not return to Missouri at all. "But, doctor," I said, "what's going to become of my bank?" I shall never forget his reply: "If I were in your condition I would not go back to Missouri, even for one day, for all the banks in the state."

It is the lot of all of us, as we live our lives, to encounter sudden, unexpected emergencies of tremendous importance as to final results. I think it is right here that most consumptives fall down and lose out: they do not seem able to meet the new, unexpected conditions. Many would have ventured back home to "settle up their business," and in doing so would also probably have settled their hash. I had the advantage of the emphatic, grave advice of my son, and it was given me to see how to do just the right thing.

My son-in-law, Mr. G. G. Robertson, now of Pueblo, was one of my assistant cashiers in the Bank of Saline at Marshall. I wrote him of my condition and put the sale of my banking and real-estate interests entirely in his hands, with instructions to close them out as soon as he could profitably do so. This he did, far better and quicker than I possibly could have done myself. And I was footloose to make the fight for my life.

#### The Treatment

My treatment began. First of all, I was put to sleeping outdoors. This is a *sine qua non* in the cure of consumption. In summer,

it is easy, of course; in winter, one must carefully prepare for it. It is not a hardship—it is a luxury beyond compare. Some people think open windows or a tent a good substitute. That is a grave mistake. Further on in this account I shall recur to this again.

The fever hung on. These fevers rarely ever leave during the summer months; it is during the cold, dry winter, in the bracing zero air that it lets go, though mine returned to plague me for three successive summers before it finally disappeared. My clinical thermometer which I carried for years is beside me now in my desk as I write; I keep it as a souvenir. At first I could almost set my watch by it. At one o'clock sharp the temperature began to rise, increasing steadily until it reached about 101 degrees, there to stay till 5 or 6 o'clock.

I continued to grow worse. Every morning, while it was cool, I would take a walk, having to rest every two or three blocks. Some impressions of those walks are with me yet. I would have to pass an undertaking establishment on my way; the caskets were on display, very handsome-looking to a healthy observer, but to me, with the still very uncertain outcome of my condition, their appearance was by no means fascinating and the beauties of their construction in no way appealed to my esthetic tastes. It was gruesome, and I shudder now when I think of it.

#### Fresh Air and Rest Turn the Scales

As the fall came on I began to grow better, and the scales, to which I resorted every week, began to show some slight betterment; for increasing weight is the test, instead of the doctor constantly tapping one's chest. A gain of even a quarter of a pound a week stands for *better*, and means that the winning of the fight is under way. In October, I went to the ranch of my brother-in-law near Fowler, there constantly improving. In December, my lares and penates from Missouri arrived, and we set up housekeeping in the little city of Fowler.

Everything looked rosy, till one day I began to spit up blood! The doctor came down from Pueblo, said he would a good deal rather it had not happened, looked into conditions, said I had been imprudent in taking too much exercise, and told me to *keep quiet*. It was simply the same story all consumptives have to tell: getting on a little too fast, committing an imprudence or two, then having to go back a month or two. I was put outdoors in an arm-chair during the

coldest zero weather, wrapped in blankets, with a hot brick at my feet, there to stay day after day till the repairs were complete—not even to take a buggy ride. After some weeks of care I was better, much better.

#### Life on the Farm Proves Beneficial

As spring opened, I decided to buy a small farm. This I did in March, built a large, roomy house especially adapted to get well in, including a royal sleeping-porch. In June, I was improved and buoyant, and we all moved out to the farm three miles from Fowler, close to the Santa Fe trail; with every advantage on my side for a safe, steady recovery.

The farm-life proved to be ideal for my convalescence. I gained rapidly in strength, though I often had little backsets from imprudence. Financially, my farming operations were a sad failure, and, besides, it was a bad year for farming in Colorado, on account of a drought. However, that was a secondary consideration for the time. But I saw that I was about as well qualified to run a farm as Bill Taft was to run the presidency, so, the next winter I rented out my farm for the coming year, retaining the residence and a few acres about the house and barn for garden and such, and then took a step destined to be of supreme importance as to my future. I bought two dozen pure-bred leghorn fowls.

Now, I did this because I wanted something to engage my attention in a way that would keep me out of doors; that would give me something to do in an interesting way and at the same time contribute to my regaining health, which was still the paramount consideration in every move I made. I had absolutely no conception of the final results of this insignificant action. These things constantly happen to a man; the very things that we attach small importance to sometimes prove to be of the utmost import as to the future.

#### Brilliant Results from a Two-Dozen Hennyery

I soon found out that I had struck the ideal thing so far as my health was concerned: something that kept me busy and interested; that required the outdoor living; that demanded no heavy labor. My little chickens soon began to hatch from my incubator, and ere long I had hundreds of nice leghorns. I began to really study the chicken proposition from a scientific standpoint and found it extremely fascinating; enough so to enlist all my brains and mechanical ability.

I kept on growing stronger and stronger in health, and sometimes actually forgot that I still was a consumptive. My flock of leghorns grew in numbers as my health returned. In the fall of 1910, I concluded that my operations were hampered so far out in the country, so I sold my farm and acquired a beautiful 10-acre tract right on the edge of Fowler, Colorado. There I built a modern poultry plant, fully equipped with incubators and modern brooders, and moved thither with my 500 white leghorns.

More and more it was demonstrated that poultry raising is the ideal thing for a consumptive to use as a fulcrum to gain health. There is nothing like it. This work fits every way, for it requires brains, energy, and initiative. As a result of it all, I am today a sound, strong "young fellow" of sixty, with a muscle that I am proud to show; with not a trace of my old enemy about the premises; with the appetite of a boy of fifteen; with the ability to get to sleep five minutes after my head touches my pillow out on my sleeping-porch; and, with all that, a large poultry establishment, conducted by myself entirely, except the rough heavy work; carrying from 700 to 1000 white leghorns of the purest quality; and the reputation of my "Fowler Egg Farm," extends all over the West.

#### Some Pertinent Advice

Now I desire to say some things to aid directly the afflicted ones, in whom I am always interested. The advanced medical profession is saying nearly everything that can be said for the extirpation of tuberculosis, and my suggestions are intended merely to supplement, not to duplicate, their efforts; for there are many considerations that can be taken up only by one who has been through it all, valuable to the person who is to pass through the fiery furnace.

God bless the doctors! I have known many of them, some intimately, and, with the single exception of the ministry, they are, professionally considered, the noblest, most self-sacrificing set of men in the land; and what I am about to say is not meant as a criticism.

In my contact with consumptives, I have been puzzled to understand one thing; namely, why some doctors have been so slow to recognize tuberculosis and to act upon the diagnosis. I can understand it in some cases—sheer ignorance.

Take a graduate of forty years ago, still hammering away on the knowledge acquired in the medical schools of that distant day, and

who could not today pass the examination of the most modest medical school for a diploma. I asked one of these men a question bearing on tuberculosis, a few years ago. His answer was, "Yes, if there is anything in the germ-theory." This doctor doubtless could not have told me who Virchow was, had I asked him; yet, he was practicing in the best families, dealing with diseases the cure of which depended entirely upon the consideration of this germ-theory; and he had been so negligent, or prejudiced, or ignorant that he was totally unaware of the almost daily revolutions in medical science and practice.

One reason, I think, why even good doctors are so slow to utter pronouncements is their ultra conservatism. This attitude, I think, is very wrong. Even in cases of reasonable suspicion, the patient should be given the benefit of the doubt and vigorous steps be taken while he is yet in the condition to work, instead of allowing the disease to progress far enough to put him in the invalid class and thus become an incubus upon his family, his friends or the state, as well as a source of infection.

Yet another reason for the delay in the positive diagnosis is, probably, that they have fewer cases than the doctors out here, who are having them every day; who recognize a tuberculous person almost as soon as they see him, and who jump on a case of tuberculosis instinctively, as a weasel does on a rat.

And there is another class of doctors, small, I am glad to say, which embraces all the conceited ignorance of the profession; who, like Woodrow Wilson's famous college professor, are so thick-headed you "can't get a new idea into their heads, or an old one out." I have even heard of the advice some of this class give their patients: that in going west for tuberculosis it is "not necessary to consult a doctor there; just do what I tell you." What would one of these doctors say to the assertion I make right here: that "no physician, unless he is personally conversant, by his own inspection, with the topography of the state, is competent to advise his patients as to what part of Colorado to come." Mark that down, please.

"Go right to Colorado" is the mandate which has sent many a tuberculosis patient to his grave. No state in the Union has a more varied topography than Colorado. On its eastern edge the altitude is barely 3500 feet, while there are great cities located as high up as 10,000 feet.

The reason why so many corpses are sent back home from here lies right here to a very great extent; patients in advanced stages of the disease are sent to altitudes of 6000 feet or higher, and this often means death; whereas, if they had stopped at a lower altitude till the weakened organs—the heart and lungs—could gradually adjust themselves to the new conditions, there would have been at least a fighting chance for life.

The doctor should know the state and what he is talking about before advising professionally. He should know, for instance, that Las Animas, on the eastern rim of the state, is about 3500 feet above sea-level, and that Leadville and Cripple Creek are both about two miles above the same sea-level. He should know that (say) 4000 or 4500 feet is about the right altitude at the beginning for the best results; that the mountainous section, being damp, is not near so good as the dry plains. And, above all, he should know that he must not attempt to give detailed advice to patients coming out here, except to tell them to seek out the best medical advice attainable as soon as they get out to Colorado.

From my preceding narrative suspicions may be aroused, perhaps convictions—that's better—regarding weight loss or lassitude, which have been going on with some of my readers for a year or so. To them I will say: Take no chances; assume that you have tuberculosis, doctor or no doctor, and act upon it; for I assure you it will be a death-grapple with the most treacherous, most persistent, most insidious foe you ever encountered, worse than Eugene Sue's Strangler. Can you get well at home? No. Can you in the Ozarks or the Adirondacks? Under the best of conditions, probably.

But, why take chances? If you are wise, you will let slip not one single means of recovery; and, my word for it, you will need them all. Open the least loophole, and through the enemy comes. Why, for instance, should my fever suddenly rise to 103, two degrees higher than usual? The answer: feeling better, I had been out shooting rabbits from a buggy, and the jar of the gun at my shoulder had disturbed the healing process of the lungs and aggravated the inflammation. It is watch, watch, all the time.

#### What Colorado, and a Good Doctor, Will Do

Can you get well in Colorado? I did, and I was in the fifties when I came here sick. You can, under the right conditions. If I have described you right, flee, flee—not ex-

actly to the mountains, but to some good doctor. And look not behind you, for the old days are gone, never to return. Have the courage and manhood to recognize that. I have in mind two sad cases, middle-aged men, who came out here, were doing well, but wanted to see the folks back home; went back on visits and are now in their graves.

And in entering the fight make up your mind to endure more self-denial and use more "grit" than ever in your life, patience beyond your wildest dreams—waiting, waiting while the pure, fresh air is drying up the corroding spots in your lungs. One minute of over exercise, one extra strain, and the work has all to be gone over again. All consumptives have the same experience in this regard. All commit imprudences and learn the bitter lesson just alike. As for the best locality, read the dedication at the beginning of this article. I have written it for you. There are other localities, but I know of none better.

It is the doctor's business to describe the pathology of tuberculosis, not mine. However, I will say, briefly, that the first stage of lesion is inflammation, indicated by fever, loss of appetite and weight; next, ulceration; and the cough and expectoration do not come till this ulceration has supervened. The night sweats come later. As for the treatment, as now practiced by advanced methods, three things are necessary: *Rest, overfeeding, fresh air.* It looks simple, but let's see.

#### Rest—Air—Nutrition

**Rest:** All tuberculous lesions are aggravated by motion or action. Jarring of the lung; too much exercise or even deep breathing are deleterious. You can think the rest out yourself.

**Overfeeding:** Frequent meals of the most nutritious character, and forced feeding if there is no appetite.

**Fresh air:** Avoidance of congregations of people or even sitting in a room with a company of people. My doctor made the limit two or three. Outdoors day and night. And right here is where Colorado comes in. Unless under right conditions, tents should be avoided. The common small tent is poorly ventilated and is dangerous. A proper tent has a board floor, board sides 3 feet high, screen 3 feet more on top of the board sides, and canvas top; canvas curtains to be used in case of storm. My own preference and use is the sleeping-porch, closed on the north and west, open wide on the south

and east; screened in; practically outdoors. I do not object to the snow blowing in on me. Ten below zero is ideal weather for outdoor sleeping.

#### Outdoor Sleeping

You might get well without outdoor sleeping, but I doubt it. It is almost impossible to observe it in the east, on account of the moist climate; for when begun it must be kept up, incessantly, the year round. Here it can be done. Some imagine it a hardship and will not undertake it. I know of at least two spots of ground in Ridge Park Cemetery, Marshall, Missouri, covered with blue grass, the "blanket of the dead," where lie the bodies of two consumptives, good men, who did not have the nerve to meet this requirement out here. It has proved no hardship to me. In summer it is easy to anybody. In winter, when the mercury is 20 below zero or lower, it seems different.

Two mattresses and a feather-bed, flannel sheets, four or five blankets or coverlids, topped with a Galloway robe above. Half an hour before bedtime a hot brick or two at the foot, between the sheets—for it is not necessary to have any shock; an outing-flannel night-shirt, woolen sweater over that, night-cap of woolen stuff, woolen socks; undressing by the fire in a warm room, a rush for the bed to prevent chilling, pulling the covers closely about neck and shoulders, rubbing the nose briskly to prevent nipping, in ten minutes asleep, not even to turn over till morning, and ready for a good breakfast at sunrise.

This is my story. But not all of it, for type cannot tell of the joy of returning health; of the gradual restoration of physical and mental vigor; how, as I grew better and stronger, my old business judgment, sadly warped by my terrible experience, came back to me; how the desire for business activity freshened within me; how I took up an occupation usually sneered at by most people, because it afforded me just the outdoor life needful for me; how I mastered it in all its essential details, up to a successful issue. Nor can they tell of the joys of the dining-room, where with a boy's appetite I found food fit for a king, prepared by the hands of my best friend, my good wife, without whose faithful ministrations through all my troubles, without whose sympathetic warnings in times of temptation to overdo things all the efforts of the doctors and the effects of even the best climate on earth would have availed nothing, and I should not have this story to tell.

# The Present Status of Tuberculin Treatment

By A. K. DETWILER, M. D., Omaha, Nebraska

THE wonderful discovery of the tubercle bacillus, the clear-cut demands of Koch's postulates, the glamor of a new theory of immunity, and the announcement by Koch that in tuberculin we probably had a cure for the ravages of tuberculosis led a famous pathologist, a few years ago, to hasten the death of his wife by what we now know were too massive doses of old tuberculin.

This early experience, as well as the example of many another zealous but overenthusiastic doctor, has convinced the more conservative members of our profession that in tuberculin we have a two-edged sword, and has prevented the adoption of our most potent single remedy in tuberculosis.

The premature, almost commercial, announcement of Friedmann's so-called cure has led to renewed interest in and a new estimate of the value of present methods of treatment, and especially of tuberculin.

## Tuberculin Treatment Cannot Be Used Alone

It must not be thought, however, that tuberculin can be used alone, to the exclusion of other methods of treatment, for its only benefit is to produce an immunity in the blood and tissue against infection by tubercle bacilli, and, what is more important, also to prevent their further spread in the tissues. We are still in doubt if it is or ever will be possible to produce a life-long immunity against the tubercle bacillus. At any rate, immunity is not secured except only by relatively large doses, and, if it seems likely that the patient can not survive the time necessary to work up to these large doses—which alone can save the individual—it may not be wise to begin treatment.

Since 1903 many investigations have been carried on all over the world, with the result that we are now practically certain of two facts: (1) That the greatest proportion of tuberculosis in the human subject, in the form of pulmonary tuberculosis, is carried by infection from person to person, and is caused by the human bacillus. (2) That some tuberculosis in children and adults, generally known as surgical tuberculosis, is conveyed to the body, by way of the alimentary canal, through milk and food, and is caused by the bovine bacillus.

Long development in different environments has led these bacilli, originally of the

same species, to assume markedly different characteristics, till now we have two great divisions, with distinct clinical manifestations of varying type: (1) bovine; (2) human.

As of the bovine type, we regard:

Tuberculosis of lymph-glands,  
Abdominal tuberculosis,  
Tuberculosis of bones and joints,  
Genitourinary tuberculosis,  
Acute miliary tuberculosis,  
Lupus.

(Perhaps meningitis and some pulmonary tuberculosis.)

As of the human type, we see:

Pulmonary tuberculosis,  
Laryngeal tuberculosis,  
Secondary tuberculous enteritis,  
Fistula in ano (usually).

There may be a general systemic infection from either type, but it is so rare to see both in the same subject that they may be regarded as antagonistic; and we all know how rare it is for a patient with pulmonary tuberculosis to develop lesions other than the human type.

It is quite possible that the greatest numbers of people are immunized in childhood against infection by human bacilli, and against pulmonary tuberculosis later in life, by infection through milk with bovine bacilli. This mild infection in early childhood, by way of the alimentary canal or neck-glands through the mouth and throat, undoubtedly protects against infection by the human type of bacilli later in life.

This is the clinical basis for using tuberculins of the opposite strain in the treatment of the disease; that is, for the human types of the disease, bovine tuberculins, and for the bovine types, the human tuberculins.

## The Varying Virulence of Germs

The variations in the virulence of the tubercle bacilli, as well as the individual resistance, decides whether or not a patient will succumb to the disease; and we often see patients who show no tendency to progress, and who have had tuberculosis for many years. In others, the bacilli are very virulent, and there is but little resistance offered by the body against the attack; and the infection is so rapid that it kills the patient in a few weeks. In these acute, virulent infections, tuberculin is of little value; but in the



less virulent forms, it is the best weapon of attack. It is of greatest service in producing immunity, because it leads to healing of the lung by a process of fibrosis—and fibrosis is the most effective barrier against the organisms which cause mixed infections.

Tuberculin does not revolutionize the treatment of tuberculosis, but, when used with care and a full knowledge of its therapeutic effects, in proper dosage, it is of great benefit. Its greatest use is in early cases, where the deposit of tubercle bacilli is localized, as in one gland, one joint or one lung apex. However, where the tuberculosis is complicated by secondary infections or too widely disseminated, it will not be of much avail.

We have found that the lesions caused by the human type of bacilli are most certainly and quickly benefited by tuberculin of the opposite strain, and in all cases of pulmonary tuberculosis we use only bovine tuberculin. The latter is more easily tolerated, does not cause reaction, is less toxic, and causes a speedier disappearance of the bacilli. In diseases of the opposite type—that is, tuberculosis of lymph-glands or tuberculosis of bones and joints or the genitourinary organs—we use the old human tuberculin.

#### The Dosage of Tuberculin

To attain success, the dose must be so small as to cause no reaction, and the temperature and pulse must be watched and accurate records of observations kept. We begin with a dose either of the human or the bovine tuberculin of 1-100,000 of a milligram, and then increase the dose every fifth day,

until at the end of twelve to fifteen weeks we have reached a dosage of 1-100 milligram—about as follows: 0.00001, 0.00003, 0.00005, 0.00008, 0.0001, 0.0002, 0.0003, 0.0005, 0.0006, 0.0008, 0.001, 0.003, 0.005, 0.007, 0.009, 0.01. Dilutions are made with a 0.5- percent carbolic-acid solution and are given with every aseptic precaution.

If the dosage as here indicated is followed, a general reaction is a very rare occurrence, while a local one is almost never seen. When the progress is good, as shown by absence of reaction and gain in weight, the dosage may cautiously be increased up to 1-10 milligram, and then kept there, relying rather upon greater frequency of injection than larger doses.

Quite frequently the tubercle bacilli disappear entirely from the sputum at the end of a course of injections; but, if the treatment by tuberculin is not persisted in, they speedily return. Hence, in some cases of pulmonary tuberculosis it is necessary to continue the injection for a long period. While tuberculin cannot be expected to heal cavities in the lungs or to replace damaged tissues, it nevertheless is a valuable aid to other methods of treatment; although, of course, it must be employed with care and discrimination and with a full knowledge of its effects.

In conclusion, we would say that the best we can offer today to a person infected with tubercle bacilli is a prolonged open-air life, superabundance of nutritious food, rest in bed till the temperature is normal, then graduated forms of exercise; together with a course of tuberculin continued for a long period and administered by a careful physician.

**T**HERE'S only one way to be modern—that's to avail yourself of every essentially modern device that offers you greater potentialities and facility in your work. It isn't enough that you can "get the work done," with the methods of yesterday; that attitude makes for retrogression—if consistently held, it will land you back in the cave and change your food-getter from an order-book to a stone club.

—The Caxton.

# The Treatment of Syphilis

*As Modified by Recent Advances in Therapy*

By G. FRANK LYDSTON, M. D., Chicago, Illinois

Author of "Diseases of Society," "Genitourinary, Venereal, and Sexual Diseases," "Sexual Hygiene for the Male," etc.

(Continued from January, page 21.)

**G**RANTING that the intravenous method of administration of mercury is safe, it would seem to be a very valuable addition to our armamentarium therapeuticum in the treatment of syphilis. I have no hesitancy in saying that it is possible to bring the patient safely under the full physiologic effect of mercury within forty-eight hours. Argument is unnecessary to prove the value of the treatment in certain emergencies. When it is carefully given, accidents should be infrequent.

I am convinced that where the entire dosage is accurately placed within the lumen of the vein no reaction whatever will occur, providing the tourniquet be removed from the arm after the insertion of the needle into the vein and before the discharge of the mercurial solution has begun. I failed to remove the tourniquet in Case 5, with the result that the portion of the vein between the tourniquet and the needle was practically cauterized, with a consequent phlebitis. This inflammation passed away in a few days and left an indurated vessel, which probably now is useless for further injection. In Case 10, considerable inflammation resulted on one occasion at the site of the injection. In this instance, I am confident, I perforated the posterior wall of the vein, thus permitting a few drops of the injected solution to enter the perivascular cellular tissue.

As to the location of the injections, either the median basilic or median cephalic vein in the forearm is an eligible site. The accessibility of these veins, however, varies, and some other site must sometimes be selected. I have found that any prominent and accessible vein will answer the purpose.

Increasing experience has shown that other salts of mercury, such as the succinimide, are as useful for intravenous medication as is bichloride.

Another point worthy of consideration is, that the intravenous injection of mercury, like that of salvarsan, is best suited to meet symptomatic and emergency indications. However, introduced in this manner, it is eliminated so rapidly that for routine use

it is not so serviceable as the intramuscular method.

Quite as wonderful results in meeting the prescribed indications are sometimes secured from the intravenous administration of mercury as from salvarsan. Its effects, moreover, are more permanent.

## Some of the Other Drugs in Use

**Iodine in Syphilis.**—Iodine still is useful in syphilis, although destined to be made less popular by salvarsan. Like salvarsan, iodine is an emergency and symptomatic remedy. It does not permanently cure syphilis, in which respect it probably bears another resemblance to salvarsan.

Iodine is especially useful when given in alternation with mercury. Its action may be formulated in this wise, viz.: (1) It liberates and makes active any mercury stored up in the system. (2) It aids in elimination of mercury. (3) It eliminates syphilotoxins. (4) It hastens the breaking down, removal, and elimination of syphilitic cell deposit.

Iodine idiosyncrasy often is a stumbling-block in the use of the drug. This often may be overcome by: (1) Adding Fowler's solution to the iodine. (2) Giving enormous quantities of water in connection with the iodine. (3) Increasing the dosage of iodine very gradually. (4) Giving frequent hot baths.

"Idiosyncrasy" often means a sluggish kidney; hence, measures to lessen the work of the kidney and increase its functional activity are indicated.

Iodine is best given in the form of the potassium, sodium or ammonium iodide. Potassium iodide is the most generally useful. Sodium iodide is better tolerated by the stomach, hence, especially adapted to the treatment of syphilis in women and children. There are on the market several combinations of vegetable alkaloids and nucleins with iodine. These remedies often are useful, but do not, and can not, ever replace the inorganic salts of iodine. For patients with very delicate stomachs, the iodide of starch is serviceable, beginning with 5 or 10 grains three times a day.

By careful administration, the iodides may be given in enormous doses. The author has

given as much as 900 grains daily for several weeks. Salvarsan is destined to displace huge doses of iodide in many cases.

*New Remedies for Syphilis.*—Salvarsan and the newer salts of mercury are valuable additions to our drug armamentarium for syphilis. The claims for all other "new remedies" are rubbish, save in so far as these same may act as adjuvants.

Arsenic, especially in the form of sodium cacodylate, is a useful tonic in syphilis. Fowler's solution also is an available tonic preparation of arsenic.

Cacodylate of sodium has been extensively exploited as a specific in syphilis by men of little or no authority in syphilology. It is a useful tonic, but not curative, and has no specific action. It may be given intramuscularly in doses of 3-4 of a grain daily, or 3 grains every second or third day. It is dispensed in convenient glass ampules. The drug should be administered by deep intramuscular injections.

Small doses of mercury act as a tonic in the case of many debilitated patients. Keyes has elaborated upon this method of increasing the hemoglobin.

Iron often is of service. The old pil. duo, containing 1 grain of iron and 2 of mercury, is very useful.

#### The Salvarsan Treatment of Syphilis

When the first furore of excitement over "606" was at its height, I expressed the opinion that the newspaper syphilologists and worshippers of strange therapeutic gods, like the stage queen in Hamlet, protested too much. Further, I prophesied that, when the commercial enthusiasm calmed down and cold experience assumed sway of professional judgment, dioxidyamidoarsenobenzol would take its legitimate place in the therapeutics of syphilis, i. e., that of a valuable adjuvant in the treatment of the disease.

I have not changed my views. That salvarsan will prove to be a symptomatic rather than a curative remedy, is possible. Its action on the spirochete justifies optimism, but some years will be required to decide this question. Tertiary manifestations occurring half a century or so after apparent cure by mercury are not reassuring.

The time test is as fair for the one drug as for the other. Commercialism or ignorance alone—or both—underlies the wild, dogmatic statements of the miraculous curative properties of salvarsan. This applies especially to those who glibly assert that a single treatment with salvarsan is equal to

many months' treatment with mercury—a statement which those who make it can not support by anything more tangible than simple guesswork.

The experience of years is the balance in which to weigh therapeutic speculation. Numerous remedies and methods have been "touted" as marvels of efficacy. Iodide of potassium once was believed to be a magician's wand; sarsaparilla was accounted a gift of the gods; McDade's mixture was the fairy godmother of all good little syphilitics. And then came "near-salvarsan"—sodium cacodylate—the specific therapeutical properties of which are "all in your eye."

Having leaned toward the side of conservatism and having waited until I felt that I was warranted in forming conclusions, possibly what I now have to say of salvarsan comes with better grace than it would if I had received the new drug as the remedy that was destined to wipe syphilis off the map, as per the magazine and newspaper schedules.

Salvarsan is of great value in meeting the following indications:

First: Prompt removal of severe genital lesions, thus lessening the danger of infecting others, the danger of detection, local discomfort, and the danger of destructive local complications.

Second: The prevention or prompt removal of disfiguring skin lesions.

Third: Precocious, or malignant, syphilis and obstinate destructive lesions, especially of the face and nose.

Fourth: Resistance to or intolerance of mercury.

Fifth: Early nerve and brain and all visceral lesions, with the exception of renal syphilis, in which latter I consider salvarsan especially dangerous. In late lesions of the nervous system, its use occasionally is justifiable.

Sixth: Syphilitic cachexia or anemia, often the consequence of a combination of over-treatment and of the syphilis.

Seventh: Severe and rapidly destructive lesions of the throat and obstinate lesions of the tongue.

Eighth: Syphilis involving the organs of special sense, excepting lesions involving the retina.

Ninth: Early tabes or, exceptionally, in late (not terminal) cases, in the hope of relieving severe pain or involvement of the sphincters.

Tenth: Infantile syphilis.

Increasing experience has shown that the drug is not promising in most cases of loco-

motor ataxia. Occasional early cases, however, are, apparently, checked by it. That the psychic effect sometimes is an important element, probably is true; but, even admitting this, why withhold the hope of benefit unless contraindications are positive?

#### Some Facts About the Wassermann Reaction

The Wassermann test in general is invaluable in salvarsan work, but is not always necessary, more especially as a preliminary. In primary syphilis, it is of no service, and in later cases the clinical behavior of the case often makes the Wassermann test superfluous for the time being, although useful in the future study of the case. In passing, I wish to relate a recent experience with the Wassermann test:

A certain Chicago physician—a pioneer and acknowledged expert in the Wassermann work—reported a case of a physician in whom syphilitic ulceration of the throat was diagnosed by “two prominent Chicago specialists.” He, the Wassermann-expert, “showed by the Wassermann test that the specialists were wrong,” etc., etc. Later, the patient’s blood was examined at a well-known laboratory, the experts of which also asserted that a negative Wassermann test proved the specialists’ diagnosis to be wrong. A few weeks later, the case was diagnosed by New York experts as one of Vincent’s angina.

Nevertheless, the “specialists” who made the “error” in diagnosis still were obstinate. These “specialists” chanced to have been Dr. Joseph Zeisler and myself. The case was as plainly secondary syphilitic ulceration of the fauces as any we ever had examined; in fact, Doctor Zeisler was rather piqued that I should have asked his opinion of so plain a case. I had requested him to see the case, merely to confirm, for the patient’s benefit, a diagnosis which apparently was plain. The sequel is interesting. The patient visited me several months later and requested that I prescribe for him, stating that he had had three positive Wassermann tests within a month.

In a case of my associate Dr. Carl Michel a series of positive Wassermann tests were obtained after repeated negatives during a period of two years.

In certain obvious, or even probable, tertiary conditions, where the Wassermann reaction is negative, we should be governed by the clinical phenomena of the case. The same is true of obscure nervous manifestations presenting a clear or even probable

history of lues, but showing a negative Wassermann reaction.

#### The Indications for Salvarsan

To insist upon the Wassermann test as the sole criterion of the necessity or advisability of the administration of salvarsan, obviously would limit this drug’s usefulness. The field of usefulness of salvarsan will be greatly enlarged by less arbitrary insistence on the Wassermann test and more careful study of the purely clinical aspects of syphilis in their relations to the use of salvarsan and of its indications and contraindications. Syphilologists were doing good work with mercury and iodide long before the Wassermann test, better work than salvarsan alone seems likely ever to accomplish.

The advantages of salvarsan should not be restricted to masters of laboratory technic, nor even to practitioners who are within reach of those who have mastered it. Incidentally, the use of the drug should not be restricted as a mere sop to selfishness and commercialism.

Apropos of the Wassermann test, much depends upon the reliability of the “tester.” Laboratory findings vary widely. Personally, I am at present enjoying the advantages of what I believe to be very reliable work in my own laboratory, in which the tests are made by my associate, Doctor Michel, whose technic embraces some apparently admirable original features.

#### Contraindications for Salvarsan

The contraindications for salvarsan have come to be pretty well recognized. Paresis, advanced tabes, late degenerative brain lesions, acute febrile disturbances, alcoholic inebriety, advanced arteriosclerosis, and organic heart lesions are generally accepted as contraindicating salvarsan. I would again lay stress on the danger of salvarsan in renal syphilis.

My associate, Doctor Michel, has shown by a series of observations under my direction that the reaction of salvarsan given intramuscularly is much more severe during the early secondary phenomena, especially if the patient has a rise of temperature.

I would suggest that possibly we may err on the side of conservatism in some of the more serious brain and cord lesions. In many of these, there is nothing to lose and everything to gain, and by using moderate or even full doses of salvarsan we may occasionally do great good. In any event, the

patient and his friends are entitled, in such cases, to the benefit of the doubt. An occasional fatality in cases which are generally admitted to be hopeless should not bar the use of salvarsan in all of these cases.

I do not quite agree with those who assert that salvarsan should not be used for diagnostic purposes. The Wassermann test is not infallible, and cases arise in which salvarsan is of great diagnostic service, notably cases of suspected malignancy, e. g., lesions of the tongue, where the Wassermann test is negative, and the microscopic findings are not positive. There are many instances of serious and destructive lesions with an obscure history, an absence of spirochetæ, and a negative Wassermann test where salvarsan may be imperatively indicated.

#### When Salvarsan is Superior to Mercury

As to the results from salvarsan, I am free to say that, while I have occasionally seen quite as remarkable benefit from intravenous injections of mercury, salvarsan is, on the average, much more trustworthy for speedy and definite action. In emergency cases in which I am doubtful as to the safety of giving salvarsan, however, the intravenous administration of mercury is my mainstay.

Renal syphilis aside, the condition of the kidney is, in general, a most important point in its relations to the administration of salvarsan. Markedly sluggish renal action is a contraindication for the drug. When actual organic renal disease is present, this applies with especial force. Syphilis complicated by renal disease of whatever kind should be excluded from consideration in the use of salvarsan.

Especial caution would seem advisable in cases where large doses of iodides have been given for a prolonged period.

In arteriosclerosis complicating syphilis, the impaired kidney—which usually is a part of the cardiovascular pathology—rather than the vascular changes *per se*—is the element which makes the administration of salvarsan dangerous. The entrance of a full dose of salvarsan into the circulation is safe in direct ratio to the rapidity of elimination of the drug.

The intramuscular and subcutaneous methods—especially the former—here are safer than is the intravenous, because with them absorption is relatively slow and the emunctories are not overtaxed suddenly. Where emergencies are not to be combated, the intramuscular method often is more effective as well as safer by reason of the slow absorption

and correspondingly slow elimination of the drug.

Granting the truth of the foregoing premises, it is obvious that a careful urinalysis prior to the use of salvarsan is a wise precaution.

The frequency of retinal complications in renal disease, the frequent recurrence of optic neuritis and the atrophy following the administration of salvarsan suggest that routine study of the renal function as a preliminary to the use of salvarsan may not only show a relation between marked or even incipient renal disease and the peculiar action of salvarsan upon the retina, but may assist us in avoiding such accidents.

As regards the problem of the danger of pernicious action of the drug on the normal kidney, study of the urine after the administration of salvarsan has failed to show renal disturbance. Animal experimentation, it is said, shows that the drug is dangerous to the kidneys of dogs; but only clinical observation of the effects on the normal human kidney can aid in forming therapeutic conclusions. Personally, I have observed no renal disturbance following the use of salvarsan where the kidneys were sound. I think it wise, however, to order the patient to drink an abundance of water before and after the treatment.

What I shall say later of the large quantity of fluid usually used in intravenous administration of salvarsan may seem inconsistent with the foregoing. I believe, however, that any slight temporary renal benefit derived from 300 cubic centimeters of normal salt solution is more than counterbalanced by the disadvantages of the method.

#### Salvarsan an Important Addition to the Armamentarium

Whatever the experience of others, I have concluded that, at the present writing, salvarsan has greatly increased our resources in the therapy of syphilis, and that it is our most valuable emergency and symptomatic remedy. As to permanent results, time alone will show. I confess that, while I am in a decidedly receptive attitude, my skepticism grows with increasing experience. That mercury, intelligently given, is the proper follow-up system to clinch the good done by salvarsan and bring about a permanent cure seems obvious. Our experience with salvarsan has not yet arrived at the point of exclusion of mercury and iodides.

Where salvarsan alone is relied upon, relapses are more frequent and earlier than



where the case has been controlled by mercury alone. However, certain cases either are resistant to or intolerant of mercury, and salvarsan is, in these cases, a *sine qua non*.

Reverting to the value of intravenous injections of mercury, I will state that recently I gave to an early ataxic salvarsan intravenously. At the same time I gave mercury bichloride in 1-2-grain doses intravenously in a similar case. Both had typical syphilitic histories. The Wassermann test was negative in both; spinal fluid not examined. The result from salvarsan was negative. Improvement in the case treated with mercury was marked after the first injection and, after three injections, astonishing.

#### The Methods and Technic of Injecting Salvarsan

The intravenous method of administering salvarsan is best in emergencies; it is least annoying and least painful. The intramuscular method, because of relative slowness of absorption and elimination, gives better results where speedy action is not indispensable.

My aim has been to simplify and decommercialize the technic of the salvarsan treatment. The smaller the bulk of the fluid menstruum within the limits of safety, the better. It is not wise to traumatize muscle or cellular tissue with a large amount of injected fluid or to throw an unnecessarily large quantity of fluid into the circulation; indeed, this sometimes is dangerous.

Absolute asepsis is necessary. This is difficult to attain in one's office, although not impossible; but, where possible, a properly equipped operating-room is best. I now uniformly give the intramuscular injection in my office, never the intravenous.

For intramuscular injection, either the lumbar portion of the erector spinæ or the glutei should be selected—preferably the latter.

For the intravenous method, any accessible vein will do, the median basilic or median cephalic preferred. The skin is prepared in the usual manner and then painted with tincture of iodine.

In the intravenous method, the vessel may be exposed by incision, if necessary (which it very rarely is, and then oftener in women than in men). Care should be taken not to apply the tourniquet too tightly, else the arterial supply will be cut off and the veins made less prominent and, therefore, more difficult to enter. The needle for the intravenous method should not be larger than a

No. 21 or 22; that for the intramuscular injection should be about a No. 18.

#### Technic of Intramuscular Method

For the intramuscular method, I prefer suspension of the drug in iodized oil of sesame, 10 percent, rubbing up the mixture thoroughly with mortar and pestle. I use from 3 to 6 cubic centimeters of the iodized oil, slowly injecting half of the dose upon each side of the spine or the glutei. The needle should be detached from the syringe before injecting, to ascertain whether or not a vessel has been punctured. If a vessel has been entered, a new puncture should be made. Gauze or cotton and collodion as a dressing completes the operation.

The degree of local reaction from the intramuscular method varies. Some patients are glad enough to keep quiet for several days; others refuse to lay up for more than a few hours. It has been my experience, however, that some of the latter regret their obstinacy a day or two later. There is occasionally a slight rise of temperature, 101° F. being the highest I have observed.

It is noticeable that in some cases there is neither local nor general reaction following the administration of salvarsan; yet, a more or less marked reaction, with local tenderness and pain at the site of intramuscular injection and a rise of temperature, both after intramuscular and intravenous methods, develops later. This is pertinently suggestive of advisability of rest for several days, in most cases.

#### Technic of Intravenous Method

For the intravenous method, I employ the Luer syringe, using only 10 cubic centimeters of sterile salt solution, mixing the dose in a mortar. I have used as little as 5 cubic centimeters, with no untoward results. As soon as the solution becomes clear after the drop by drop addition of a 15-percent solution of sodic hydrate, the fluid is filtered and injected.

Time spent in endeavoring to neutralize the solution is time wasted, for precipitation results and filtration merely removes a greater or less quantity of the salvarsan. The alkaline solution, moreover, is absolutely unirritating when the technic is proper. Any local disturbances following the operation indicate, not irritation from the drug, but some fault of technic. The quantity of sodium hydrate necessary to produce a clear solution seems to vary somewhat with different samples of the salvarsan.

The fluid, constantly, kept at blood temperature, must be injected very slowly. The rapid flow of blood dilutes the drug so thoroughly, if slowly injected, that it is absolutely shorn of irritating properties. A gauze dressing completes the operation.

#### Causes for Local Reactions. Repetition of Dose

Local reaction following the intravenous method means one or several of the following:

1. Infection.
2. Injection of the fluid into the circum-vascular cellular tissue.
3. Penetration and injection of the wall of the vein.
4. Transfixion of the vein and injection into the sublying tissues.
5. Too rapid injection.

Patients usually suffer very little inconvenience after the intravenous method, many of them none whatever. In some there is a slight rise of temperature; in a few, a rise of 3 or 4 degrees. Psychic shock occasionally is met with.

Independently of the result of the Wassermann test, I think that it is wise to repeat the

dose of salvarsan in about four weeks. Subsequent treatment should be governed both by the Wassermann test and the clinical course of the case.

If the clinical aspect of the case shows that the first dose of salvarsan was ineffective, the Wassermann test is superfluous in deciding the necessity or time for a second dose. Where there has been marked improvement, or complete removal of symptoms, the Wassermann test, if available, is an excellent guide for the second dose.

On general principles, however, the second dose would seem to be indicated, irrespective of the result of the Wassermann test. A second blow at the already weakened infection is likely to be much more effective if given early than if deferred until a positive Wassermann reaction, showing a recrudescence of activity, is obtained. This, like some other heresies in this chapter, may not be ultrascientific, but appears to me to be common sense.

Thus far, I have seen no special advantage in the use of neo-salvarsan.

(To be concluded.)

## The Precipitins and Their Relation To Meat Inspection

### *A Method of Identifying the Animal Source of Meat*

By **C. G. SAUNDERS, B. Sc., V. S.,** Toronto, Canada

Professor of Canine Pathology, Ontario Veterinary College, Toronto

**I**N THE handling of meats and the preparation of meat food-products, attempts are sometimes made to substitute meat of a lesser quality and value for that of higher quality and price. When large portions of meat and bones are available for examination, the task of identifying the animal to which they belong is not impossible to the expert inspector. In the case, however, of finely minced meats, such as form the contents of sausage and bologna, mince meats, and the like, it is practically impossible by ordinary methods to detect adulterations in the form of inferior meats.

Chemistry and the microscope, except as to horse-meat, fail to give reliable results, but the biological method will readily differentiate the component parts of which a mixture of meats may consist. It may also be advantageously employed for the positive identification of the blood of the various mammals.

The method is based on the formation of substances in the blood-serum of animals which received for a period of time the blood-serum or muscle extract of other animals belonging to some different species of animals.

If, then, such blood serum (rabbit) is added to the blood-serum or muscle extract of an animal of which the blood-serum or muscle extract served the preparatory treatment of the animal (rabbit), a cloudiness will develop in the latter, which, on standing, results in a precipitate. The substances thus formed in the blood-serum of an animal injected with the blood-serum or muscle extract of another animal of different species are termed precipitins, and are designated as sero- or musculo-precipitins, according to whether the serum acquired its precipitating activity in response to the injection of blood-serum or muscle extract.

For practical meat-inspection purposes these reactions are specific; because, although closely related animals, such as horse and ass, sheep and goat, and so on, each give the reaction for their species, the meat inspector's object is to prove adulteration and fraud.

I have mentioned the blood-serum reaction because, although not concerned with meat inspection—except in rare cases, where identification of blood of different animals is called for—of its bearing upon forensic medicine. I have not had the least difficulty in distinguishing the blood of cattle, sheep, and swine. The reaction is extremely delicate, it being possible to recognize blood in a dilution of 1:50,000. To quote Haliburton: "To discover whether the stain is blood or not, is by no means a difficult problem; but to distinguish human blood from that of the common mammals is possible only by the biological precipitin test."

The various textbooks on meat inspection that notice this test at all pass it by with scanty mention, as beyond the scope of the meat-inspector, because being so surrounded with technical difficulties as to be impracticable. In order to satisfy myself as to whether ordinary care in the technic would suffice or not, I conducted the following experiments in the college laboratory:

#### Experiments with Serums and Seroprecipitins

Blood-serum from a bullock, a sheep and a hog was collected into sterile bottles and kept in a cool place. Then three rabbits were marked, in the ear, 1, 2 and 3, respectively.

Rabbit No. 1 received 10 Cc. bullock-blood serum, subcutaneously, every other day for twenty injections. In like manner rabbits Nos. 2 and 3 were injected with the blood-serum of the sheep and the hog, respectively. The only precautions taken were, to employ a sterilized hypodermic syringe and to paint the site of the injection (just behind the shoulder) with tincture of iodine. In no instance did the injections cause any untoward symptoms or appear painful to the subjects.

After the twentieth injection the rabbits were given three days' rest. They were then killed, their blood-serum was collected, and this placed in sterile bottles numbered, respectively, 1, 2 and 3. Another rabbit, one that had had no injections, also was killed and its blood-serum collected for control. Next, three pieces of paper were prepared by allowing drops of blood from a bullock, a sheep and a hog, respectively, to dry upon them. These slips of paper were

separately placed into test tubes, labeled 1, 2 and 3, and the blood dissolved out with 10 Cc. of double-normal saline solution. The table below shows the reactions occurring upon the addition of a few drops of the respective serums and the control-serum. The reaction, where such occurred, was first of all a distinct cloudiness, later flocculi appeared, and lastly a grayish-white precipitate settled to the bottom of the tubes. In the following table the reactions are recorded with an X; absence of reaction is indicated by an O; viz.:

Rabbit-serum.	Test tube No. 1.	No. 2.	No. 3
No. 1.....	X	O	O
No. 2.....	O	X	O
No. 3.....	O	O	X
Control-serum.....	O	O	O

In each case serum No. 1 was added to tubes 1, 2, and 3. Serum No. 2, to tubes 1, 2, and 3. Serum No. 3, to tubes 1, 2, and 3. Control-serum, to tubes No. 1, 2, and 3.

A differential test was then carried out. A piece of paper stained with a mixture of the blood of a bullock, a sheep and a hog now was prepared, the mixed blood was washed off with normal saline solution, the solution filtered, and the filtered solution treated with a few drops of all three rabbit-serums and the control-serum. All three serums gave the reaction, but the control gave none. These reactions took place whether the blood stain was freshly dried or had been dried a month. By further investigation I found that moderate heat did not interfere with the precipitating power of serums, but that excessive heat destroyed it completely.

Owing to the difficulty of procuring blood-serums of other animals to experiment with, I was unable to investigate further; however, von Rigler, Nicholas, and Vallee have found it true for the blood-serum of the dog, horse, cat, deer, and other mammalians.

It appears, therefore, that even with the simplest manipulation this method of blood identification is quite reliable and well within the bounds of practical application by a qualified veterinarian.

My next series of experiments deal with what is of greater importance to the meat-inspector than even the identification of blood; namely, the differentiation of meats. It is a firm conviction in the public mind that sausages may contain, besides pork and beef, other meats, such as dog- and horse-meat; and the question may at some time confront the analyst as to whether this is actually so.

The following experiments, if duplicated, will, I think, place in the hands of the meat-inspectors a positive means of determining the truth of this contention, if need be.

#### Experiments with Musculoprecipitins

In this series of investigations, blood-serums of various animals were replaced by muscle extracts. Extracts were made from the muscular tissue of bullocks, sheep, and hogs with distilled water, the proportions being, muscle 1, water 19 parts. (Martel.) The muscle-tissues were macerated for six hours, filtered, and placed in sterile bottles labeled Nos. 1, 2, and 3.

Three rabbits, earmarked, respectively, 1, 2, and 3, received subcutaneous injections every other day for twenty injections. After the twentieth injection the animals were rested for three days, then killed, and their blood-serum collected into sterile bottles labeled Nos. 1, 2, and 3. It was found necessary to prepare fresh macerations of muscle-tissue for each injection, because of the rapid putrefactive changes.

As in the case of the blood-serum experiments, rabbit-serums Nos. 1, 2, and 3 gave reactions with their corresponding muscle extracts 1, 2, 3, and with them only. It was found that, no matter what mixture of muscle extract was made, the corresponding rabbit-serum gave the reaction. For instance, if

beef and hog extracts were mixed, beef- and hog-rabbit serum each gave reactions, but if tested with sheep-rabbit serum no reaction occurred.

During my investigations samples of sausage, bologna, and mince meat were tested, also corned beef and pickled pork, and in every instance the reactions took place. With cooked meats, on the other hand, the results were not so good. Extracts made from the center of a roast gave fairly good reactions, but those made from the better-cooked portion were not typical. The method of making the extracts for these tests was identical in each case, that is, macerating 1 part of finely divided meat with 19 parts of distilled water for six hours. The extract to be tested was then diluted with an equal amount of double-normal saline solution, filtered, about 10 Cc. of this placed in a test tube, and a few drops of the respective rabbit-serum added.

To sum up, the foregoing investigations have shown the biological methods, through the agency of the sero- and musculo-precipitins, to be reliable, and within the reach of the meat-inspector, for the identification of mammalian blood, and of uncooked muscle-tissue, such as is liable to be used for the adulteration of meat-products. The manipulation is not complicated, while the serums will retain their activity for a month at least, if kept under favorable conditions.

## Making Good in Medical Emergencies

By GEORGE H. CANDLER, M. D., Chicago, Illinois

*EDITORIAL NOTE.—Last month Doctor Candler gave us an introduction to a series of short articles, each complete in itself, on medical emergencies. This month he presents a very interesting chapter, in which acute alcoholism and apoplexy are discussed. Other topics will be considered in alphabetical order.*

### I. ALCOHOLISM

WHEN sufficient alcohol has been consumed to cause loss of consciousness, the conditions demanding the attention of the physician may be serious. First, it is essential to exclude definitely the possibility of trauma, for not infrequently the inebriated individual either "falls hard" or is knocked down, either by a vehicle or some one with whom he has had "a disagreement." Persons "found unconscious" in an alley, and brought home or to the physician's office by strangers, should always be examined with particular care and, if possible, the names and addresses of those conveying or attending them should be ascertained.

Unfortunately, it is not easy to differentiate the stupor of concussion of the brain from that of simple alcoholism, and when the inebriate suffers a cerebral injury—without visible lesion—it is almost impossible to arrive at a definite conclusion. The drunken man usually breathes stertorously and his pulse is full and bounding; in concussion, the respiration is shallow and the pulse weak and fluttering. The pupils of the alcoholic may be either fixedly dilated or contracted and the conjunctivæ are congested; in concussion the pupils are equally contracted and sensitive to light, but in severe cases marked dilatation may be present. In both conditions the individual may be aroused by shaking and shouting his

name. The temperature of the ordinary "drunk" may be as low as 90° F.; in concussion or compression of the brain alone, no such marked reduction occurs.

#### "Knock-out Drops" May Mask the Diagnosis

The city physician must also remember the possibility of chloral poisoning—"knock-out drops." The convivial stranger with a "roll" or an attractive young woman who is inveigled into some questionable resort not infrequently receives this poison in a glass of beer or a cocktail; if the stupor which follows is regarded by the physician called in as simple alcoholic insensibility the criminal really responsible is enabled to get far away from the scene and possible punishment before "the murder is out." In chloral poisoning the chloral odor can sometimes be detected on the breath, the face of the victim is livid, the pulse slow and very weak. The respirations are diminished in frequency and the surface of the body is cold. There is usually complete muscular relaxation and the reflexes are abolished. But—if any considerable quantity of alcohol has been consumed also, these symptoms may be masked.

However, in every case of suspected alcoholism (apoplexy having been excluded) the sooner and the more completely the stomach is emptied the better; the character of the vomitus will, as a rule, clear up matters considerably. Unless the physician is positive that he is dealing with a plain case of "too much John Barleycorn," the ejected matter should be saved for subsequent chemical examination.

#### Treatment of Acute Alcoholism

Loosen the clothing about the neck and waist, then administer, hypodermatically, 1-10 grain apomorphine hydrochloride, and follow, if possible, with lavage. The stomach is rarely emptied thoroughly by vomiting, and flushing of the viscus with warm salt or boric-acid solution is distinctly beneficial.

If the patient is not conscious by this time, but responds in some degree to shaking, shouting, and the like, keep this up, or better still, get him on his feet between two able-bodied assistants and keep him moving—that is, if heart action and general condition are satisfactory. If this does not suffice, dash hot and cold water alternately over the face and chest or slap the chest and abdomen vigorously with a cold wet towel. As soon as he can swallow give a cup or two of strong black coffee. If the condition is grave, pour this into the stomach through the tube after

lavage. In emergency, eight ounces may also be thrown into the rectum. If urine has not been voided, catheterize under aseptic conditions. The patient should, if possible, be wrapped in hot blankets.

Even in the more pronounced forms of alcoholism the procedures described will usually result in a return of consciousness. Persistent unconsciousness denotes a more serious poisoning or injury. Only rarely in simple alcoholism, but generally if chloral or other narcotic has been taken, does it become necessary to stimulate the patient or to produce artificial respiration. Such stimulants as strychnine and ammonium carbonate may be administered with advantage, especially if there is a suspicion of chloral poisoning. Ammonium carbonate, in 10-grain doses, is the best "sobering-up" agent with which I am familiar. It must, of course, be given in plenty of water. A full dose of olive oil (six to eight ounces) is also efficacious. Given to a man who is "all lit up," it will soon sober him so that he can transact business.

#### Delirium Tremens

It is generally supposed that only chronic inebriates "see pink snakes." As a matter of fact, the most violent attack of delirium tremens I have ever observed occurred in a man of forty after his initial debauch, which lasted exactly one night. The habitual drinker will tell you that "the fellow who eats can drink also," and it is a fact that abstinence from food increases the liability to delirium.

As a rule it is not at all difficult to diagnose a case of delirium tremens. However, very similar symptoms may be present in meningitis, and an oncoming erysipelas may cause a furious delirium. In every case it is well to examine the lungs so as to be able to exclude pneumonia. In the early stage of delirium the patient is restless, fearful and suspicious of everyone. He "sees (and hears) things." If not engaged in killing snakes or chasing pink mice, he will be actively engaged in some other imaginary employment.

Such a patient talks or mutters incessantly. Now and then he attempts to walk up the wall in a dignified manner. The next minute he may embrace the physician or he may try to brain him with the very first thing that comes to hand. His demonstrations of friendship, therefore, are distinctly undesirable. Those he usually loves are now his worst enemies, and he will destroy his most cherished possessions with infinite glee. The hands jerk, there are tremors of the muscles and tongue, and, not infrequently, he retches



constantly. The tongue is usually coated and the pulse soft and rapid. The temperature may be high, especially in the later stages, when a typhoid state may obtain. It is during this stage that erroneous diagnoses are so often made, for very often the relatives foolishly try to hide from the physician the real state of affairs.

#### The Treatment of Delirium Tremens

The patient suffering from delirium tremens must never be left alone for a minute, and his attendant should be physically well able to handle him. The doctor should be careful during his administrations not to get into a position where his patient can take an advantage, for even the most dignified physician may "look like a rodent" to the sufferer, and he will do his best to destroy such "vermin." As a colleague expressed it, "After one has been knocked silly once or twice and bitten a few times in some particularly tender portion of his anatomy, he ceases to have a really tender feeling for jimjams in either sex." Such individuals are distinctly dangerous not only to themselves, but to others and need stern repression. They should be put to bed and restrained with a stout sheet fastened under the mattress.

Sleep does not come readily to the victim of delirium tremens. In the more violent forms, it is advisable to administer cautiously a few whiffs of chloroform and then, during the short period of tranquility, give a hypodermic of apomorphine. If the patient can be held quiet, the syringe may initiate proceedings; a tenth of a grain of the drug usually has a quieting effect. The stomach and bowel emptied (by emesis, lavage, and enema), the patient may receive a dose of chloral hydrate per rectum (grs. 20 to 30) or 15 grains of chloral with 30 grains of sodium or ammonium bromide by the mouth.

Hyoscine hydrobromide (gr. 1-100) may be substituted for the bromide-chloral mixture, and hyoscine-morphine-cactoid, in moderate dosage, is even more satisfactory. The primary effect may be maintained with hyoscine, as it is rarely desirable to give morphine in any large quantity to such patients. Quite small doses of apomorphine administered at longer or shorter intervals will control the nervous phenomena, and pilocarpine may be added with advantage.

The pulse must be watched, of course, and under certain circumstances strychnine with digitalin, cactoid, caffeine or sparteine administered. Usually, however, it is first necessary to secure thorough relaxation and elimi-

nation. During the stage of depression capsicin should be given with strychnine, and quassin or other bitter tonics may advantageously be added. Clam bouillon and hot milk with Vichy are the best nutrients.

#### II. APOPLEXY—CEREBRAL HEMORRHAGE

Intracranial hemorrhage may occur at any age, but it is rarely observed in persons under forty. Syphilis, lithemia, alcoholism, nephritis, and other conditions which have a tendency to cause deterioration of the blood and to produce arteriosclerosis predispose to its occurrence. Exciting causes are muscular effort, excitement, anger, fright, overheating or overeating, and overindulgence in stimulants. Advancing age is, of course, an important factor.

There may be symptoms premonitory to the "stroke," such as vertigo, headache, a sensation of fullness in the head, ringing or buzzing in the ears, tingling of the hands, and the like; but not infrequently the patient falls suddenly unconscious or is seized with a convulsion, without any premonition whatever. In some cases he retires well at night and in the morning cannot be aroused. Still more rarely, paralysis may come on without coma or marked disturbance of consciousness.

#### Lesions and Symptoms

Naturally the character of the symptoms depends upon the location and extent of the hemorrhage. The most frequent essential lesion is rupture of a miliary aneurism, some branch of the middle cerebral artery being most often involved. Hemorrhages in the cortex, cerebellum or pons are usually small; those in the vicinity of the base extensive. In such cases, coma is usually profound, the face suffused or cyanotic (in syncope and epilepsy it is blanched), the respiration rapid, full, and "snoring" or stertorous. A peculiar puffing of the cheeks accompanies expiration. The pupils are unequally dilated and do not respond to light. The pulse *early* is full and slow, the tension normal (in syncope it is absent or feeble); but, later, pressure decreases and the pulse becomes rapid.

There is more or less paralysis of one side of the body. Hemeplegia is deemed *complete* when arm, face, tongue and leg are affected; *incomplete*, if any of these parts remain normal. It should be remembered that paralysis generally occurs on the side opposite to the lesion. Very frequently there is a peculiar rotation of the head and ocular deviation towards the side on which hemorrhage has occurred. While all the muscles—even the

sphincters—are relaxed, the paralyzed limbs, if lifted, fall as a dead weight.

The temperature is usually subnormal, but, should the patient survive, it rises within twenty-four hours to 100° or 101° F. The skin is cool and moist, and the reflexes are abolished. The affected limbs may at first be warmer than the rest of the body.

It is really not at all difficult to recognize this condition quickly, yet the mistake of giving stimulants has been made with surprising frequency. Naturally, whatever chance the patient has is materially minimized by such inadvised and dangerous treatment. In favorable cases, properly treated, after six to twelve hours the coma grows less pronounced and the patient can be partially roused; his condition at this time resembling deep natural sleep. Slowly full consciousness returns and the reflexes are finally reestablished. Now the paralysis of the tongue becomes fully apparent, for speech is difficult, though liquids can be swallowed more or less easily. With these later stages of the malady, however, we will not concern ourselves—the *emergency* has passed.

#### Treatment of Cerebral Hemorrhage

Undress the patient and put him to bed immediately. Put him on his back, with the head and shoulders moderately elevated, and see to it that nothing presses upon the vessels of the neck. Then apply cold to the head and heat to the feet and legs. Be careful not to burn the skin.

Arterial tension, if high, must be reduced as quickly as possible. If you are sure of yourself, and your patient is a short-necked, plethoric individual, do not hesitate to bleed—drawing ten to twenty ounces of blood. Glonoin, gr. 1-128, every twenty minutes is recommended by many competent clinicians, but, since it dilates the cerebral vessels, I rather prefer veratrine and aconitine in alternation. The veratrine (gr. 1-64) is given hypodermatically every half hour, and aconitine hydrobromide (gr. 1-800) dropped into the mouth. Large amounts of fluid must not be given the patient, since swallowing is im-

possible; but if a solution of aconitine is administered, drop by drop, it will be absorbed.

When cerebral hemorrhage merely *threatens*, give a briskly purging drug which, alternated with lobeline sulphate in full dose, hypodermically, will often avert the danger. In every instance prompt and thorough evacuation of the bowel is essential, and elaterium has long been regarded as the purgative of choice. Unfortunately it is not always easy to get elaterium down, even if an active preparation of the drug be available. Under such circumstances, 2 drops of croton oil, in emulsion, milk or a little melted butter, placed well back on the tongue, will prove effective. Of late 2 grains of pure magnesium sulphate, dissolved in 30 minims of water and given hypodermatically, has been found a prompt cathartic by me.

As soon as the patient can swallow, follow with calomel, gr. 1-3, and elaterin, gr. 1-6, every half hour till four to six doses have been taken. As the lower bowel is frequently plugged with feces, flush it thoroughly with warm soap-suds. Catheterization is, of course, essential, the bladder being emptied every six or eight hours.

Solanine hydrochloride is to be preferred to the bromides if there is persistent muscular twitching, but lobeline sulphate and free elimination will usually overcome any tendency to convulsions. The cold cap should be kept constantly upon the affected side, and arsenic iodide or calx iodata given steadily to promote absorption of the clot. Daily doses of the saline laxatives—preferably with the addition of colchicine—are essential during the stage of resolution. Sometimes small doses of strychnine are useful after subsidence of the acute symptoms. The drug must, however, always be given with great caution. Cautoid would, I feel confident, meet the indications more satisfactorily.

Before closing the subject I would again urge the physician to study well the condition present in his patient, and to review the physiological action of glonoin before giving that drug as a routine initial medicament.

(To be continued.)



# Some Accuracies of Practice

## *The Correlation of Precise Methods of Diagnosis and Treatment*

By B. G. R. WILLIAMS, M. D., Paris, Illinois

*EDITORIAL NOTE.—This is another installment of Dr. Williams' series of articles, in which he is telling us how to correlate the facts given by the clinical laboratory with our plans for the treatment of disease. The articles are intensely interesting, and exceedingly practical.*

### Urea

THE valuation, clinically, of urea, I think you will agree, is the most important of the quantitative urinalyses; and, yet, I dare say no two of us will entirely agree upon all the diagnostic and prognostic phases of the urea estimation. Moreover, many men, including some who are regarded as keen clinicians, hold rather hazy ideas in this regard. The surgeon (whether of the class A double plus, x, y, z or zero) will lay down rigid rules, and then promptly ignore them. Ofttimes he will shrug his shoulders (as only one who belongs to the A class can shrug them) when urea is reported low, for experience has taught him the lesson that this evidence, taken alone, is quite worthless and the prognosis is as much a gamble as before.

Reconcile, if you can, the various statements of standard texts, and you will have gained a much more comprehensive idea of the meaning of low urea than many of the authors possess. I hasten to say that in my experience, representing the examination of quite a few thousand urines, as a rule high urea is uncommon and demands no treatment as such. If urea is increased in hyperthyrea, carcinoma, and the many other conditions cited by the texts, such increase has not been striking in the cases examined by me.

To comprehend the significance of low urea in a given case, we must first of all understand that decreased elaboration is quite as likely to prove the explanation as is decreased elimination. And to prove that failure of manufacture may be held responsible instead of retention, it is quite imperative that we reckon not with the urea computation alone, but take into consideration other urinary findings.

Thus, in acidemia and acidosis, we have seen that low urea is to be explained by the fact that volatile precursors are utilized by the body to neutralize in part the poisonous acid products, so that the fixed alkalis of the tissues may be spared. Furthermore, we know that anything which injures the parenchyma-unit of the liver may prevent, in part at least, the elaboration of urea. Neither do we need to recount the urinary findings

that may give us the clew. With a scanty proteid diet, we cannot expect the kidneys to eliminate 32 Grams of urea daily. Where would they find it?

Having carefully considered the many, many factors concerned in low urea, let us turn our attention to the question of decreased elimination.

Urea, as you know, practically is nonpoisonous, but is a very active diuretic. In the acute nephritides, urea is elaborated by the liver in practically normal amounts (at least such is the case until late, when this organ may suffer secondary injury); but, coming to the diseased kidney, it may be retained in part.

I say "may," for in acute nephritis, where such normal nephric parenchyma as is present cannot quickly compensate, urea retention is invariable.

However, in chronic kidney disease, where time is given for compensation, uninjured cells may take upon themselves the duties of those which are dying; and, so, in some cases the urea may be perfectly eliminated during long periods of time. Such a compensation is easily broken; but, do not do this, as I have seen recommended, just to prove the diagnosis, for you may place your patient where treatment is in vain.

Experience, however, will teach any true student of nephritis that urea elimination is rarely perfect, even in the chronic cases, for these apparent exceptions are not true inflammations, but secondary injuries due to poisons, infections, and so on—the so-called nephroses, which are not progressive unless the cause be progressive. In other words, the progressive, or true, kidney inflammation, be it acute or chronic, probably invariably is associated with true urea retention.

### Prognostic Import of Delayed Elimination of Urea

Let us now turn our attention, for the time, to the prognostic import of delayed urea elimination.

We know that, while urea scarcely is poisonous, the kidney which fails to excrete all

available urea coming to it simultaneously falls short in some of its other work. We are confronted by a problem identical with that considered in the several functions of the hepatic cell. For, if the kidney-unit can not pass on into the urine the most perfect of diuretics, how can it hope to eliminate the unknown toxic substances that contribute to the syndrome termed uremia? And, so, the daily elimination of urea not only may give us an idea as to the diagnosis (other findings considered, as cautioned above), but will index quite accurately the outlook and what may be expected in case we do not hasten with the treatment.

The therapeutic problems are somewhat different from those supplied by functional hepatic incapacity (urobilinogenuria). Only the liver can do the liver's work; and, so, hepatic cells must be whipped to this work, if they will not or can not perform their duties in the cell community. Fortunately, however, we do not find it necessary to force the kidney to excrete urea; and this is well, indeed, for experience has taught us that in a true inflammation kidney stimulation must eventually prove kidney irritation, and compensation, consequently, be false. When urea, the perfect diuretic, fails to stir to action discouraged renal cells, what can we hope to gain but disaster from the use of caffeine, squills or diuretin?

And, so, we may spare the kidney, for we may call to our aid the other emunctories. Urea retention should not suggest to the therapist that urea in the urine must be increased at once; but rather that it and the poisonous bodies which hobnob along with it must be rushed out at some other exit, that the inflamed tissues be given a rest (indicated in every inflammation) and the uninvolved portions be permitted time to compensate, *that later, both the urea and the urine poisons may be passed by the proper route.*

#### How to Protect the Damaged Kidney

How may we do this? First of all we are advised to prevent waste. Waste, we know, always is of a poisonous nature; and our remarks at this point must include urea, for, though scarcely considered a poison, but rather a harmless combination of poisons in health, it cannot so be considered when held back in the blood and tissues.

Thus, the proteid diet must be reduced, although, of course, these food principles cannot be absolutely excluded. Certain of the other waste matters that are to be avoided

have been thoroughly considered under albuminuria and its treatment, so that we shall not pause to detail them. Besides these, we must eliminate such waste as cannot be avoided, including perhaps the essential poisons of uremia.

Now we must call upon the bowel and the sweat-gland to help us out; and, so, elaterin and saline cathartics for the former and sweating-packs and pilocarpine for the latter are indicated. Here our drugs are severe and even dangerous. Experience has taught us that in the desperate case much more can be expected from the sweat-gland than the bowel. Personally I have never seen results from the bowel route alone, in trying to get rid of urea and its poisonous associates. The main stunt of the bowel is, to pass liquids from its lumen into the body-tissues—not *vice versa*; and it resents persistent attempts to force upon it this *vice versa* function.

In our extremity, we may appeal to the sweat-gland, however, and this expedient rarely will fail us. We have learned that the sudoriparous apparatus may quickly adapt itself to the seasons, but always inversely to the renal activity; and, so, in disease, with but little persuasion it will take upon itself many of the kidneys' functions. We have proven in the laboratory that the sweat-gland may eliminate urea; but, better still, we have shown at the bedside that it may eliminate the "uremic poisons." Accordingly, we serve pilocarpine and hot-packs, and these glands get busy. Treatment may be pushed in a desperate case, but the heart must be watched closely and vomiting prevented if possible. Dosage will depend upon circumstances. If heroic (not foolhardy), the results often are astounding.

#### As to Other Renal Tests

The reader may wonder what I am about to say regarding other functional kidney tests. I will tell you. The 24-hour urea estimation, taken in connection with a knowledge of the diet and other urinary findings, may be considered the most valuable functional test known to clinical chemistry. This test could, perhaps, be made even more valuable to diagnosis (but not to prognosis) if we were conscienceless enough to play with suspicious kidneys.

Where the urea test misleads once, the phenolsulphonephthalein test misleads twice. The color tests cannot be precise; and, if so, are based upon arbitrary standards that have no relation to what the kidney would like to

do (the normal kidney just loves to excrete urea), and we have nothing to prove that such standards are correct. These substances are extraneous, and, hence, we do not know whether or not they chum with the poisonous bodies causing uremia.

The enthusiasm of the men who are using and writing of the phenolsulphonephthalein test may be explained when our attention is directed to the fact that they do not seem to know how to use the urea-computation methods, but base conclusions upon urea percentages in single specimens. The average man, of course, knows better and cannot but be amused at this lack of understanding upon the part of such "experts."

#### Total Nitrogen

We have seen that much may be learned from the study of the urea elimination. It is well for us to keep in mind that all of the nitrogen excreted by the urine is not in the form of urea, but in part as ammonia or ammonia-like bodies, amino acids, and so on; all of these being rather simple nitrogenous compounds, more poisonous than urea and scarcely true diuretics. Of course, ammonia rarely occurs free, but rather in combination, especially with acids. Normally the liver works up perhaps four-fifths of the proteid waste into urea.

Far be it from me to enter deeply into a discussion of total nitrogen and its variations, subjects so important to the diagnostic laboratory worker, but which may better be studied in texts than in a series of practical articles of this nature. Nevertheless, it is well for the practitioner to keep in mind that low urea is not always proof of kidney disease; and he should understand why this is so.

Thus, as we have stated, in hepatic diseases, acidemia, and acidosis, there is decreased elaboration, but the total nitrogen excreted by the kidneys may not be reduced considerably. It is well to keep in mind that the acidemias and acidoses, although marked, may even be masked by increased ammonia. This is an important diagnostic point, especially in regard to the intestinal intoxications when indicanuria is persistent, although calculation by Folin's method may fail to show high acidity. Here, besides treating the cause, we may find that the ammonia output may be reduced by good-sized doses of the fixed alkalis, especially by sodium carbonate.

#### Total Chlorides

We have been told to treat nephritis with sodium chloride. In turn, we have been

cautioned that this salt will not be properly eliminated, but retained in the circulation and tissues and thus favor development of dropsy or of albuminuria.

Now we are again being urged by all means to use sodium chloride in nephritis.

Medicine is a strange profession, after all; and it is pretty hard to keep in fashion. We get together and form medical societies. By and by these societies (not for profit) become rich and set aside groups of physicians (and laymen), to keep us informed as to the value of drugs. Promptly they show up an old standby and condemn it in no uncertain language. Therefore, we throw aside (maybe) such a drug as useless, only to find tomorrow that this same group of men have changed their opinions once more. One man arises in medical colloquium and advises the use of a solid diet in typhoid fever. A colleague drags him over the coals—but the argument ceases, with neither converted. By and by we fall prey to the Eberth bacillus and are obliged to call these two men into consultation—but we are getting off our subject.

Martin Fischer and others have satisfied themselves that sodium chloride should be administered in all cases of nephritis. This makes my medical library look pretty shabby, for I find, upon referring to my books, that common salt has been suffering from social ostracism so far as the nephritic is concerned. As a matter of fact, Fischer's theory, while beautiful and no doubt partly correct, still is only theory and unfortunately has been carried a bit too far.

Would you believe it: looking over my files of a certain medical journal not long ago, I was surprised to see dozens upon dozens of pages given over to the authors of the phenolsulphonephthalein test and the treatment of nephritis just referred to, long articles of "stuff," and scarcely a casual mention of urea functional tests or details about salt-free diets.

Every experienced laboratory worker surely has observed the phenomenon of salt retention in renal insufficiency; and every physician who has tried salt-free diets, especially in the parenchymatous cases, has been struck by the favorable influence these have exerted upon the symptoms, if not upon the course, of the disease. This is a circumstance to be expected, for, when retained, sodium chloride results in hypertonic body-fluids, favoring oliguria, albuminuria, edema, and decreased perspiration; the latter condition doubtless being the most unsatisfactory of all in the treatment of the nephritic.



I need not go deeply, in this article, into the subject of salt-free diets except to review a few principles.

The first move is, to cease the use of salt both in the kitchen and at the table. If the patient is a meat-eater, this will work a hardship. And now comes another caution; for we know that meats contain considerable amounts of sodium chloride, and meats should almost be excluded from the diet of patients where fifty percent of the urinary sodium chloride is retained. The most satisfactory results, according to Forchheimer, have been obtained in vegetarians.

I will repeat once more that a milk diet is most advantageous; but such a diet must not be rigid even from the first, for, though we are able thus to reduce sodium chloride, we are increasing the albumins. Besides, few pa-

tients will stand for such a diet; and this holds especially in the chronic cases. However, milk forms an excellent basis for the dietetic treatment. To it may be added the carbohydrates and fats almost as desired, the proteids, however, mainly in the vegetable forms.

Remember that when less salt is taken with the food the patient shows a tendency to take less water, and concentration of the urine, decreased perspiration, and so on, are likely to result. *When decreasing the salt, by all means, increase the water.*

The urinary chlorides are temporarily reduced in many other conditions, such as diarrheas, fevers, and so on; but invariably this is followed by a compensatory increase if the kidneys are not diseased.

*(To be continued.)*

## An Ophthalmologist in Egypt and Palestine

By FLAVEL B. TIFFANY, M. D., Kansas City, Missouri

WHEN one leaves behind him the clinics of Vienna and Budapest, and, traversing the length of the Adriatic Sea, enters Greece by way of the port of Patras or of Peiraeus, he is in many respects already in the Near East. For, Athens is the only city in Greece which is in any sense modern; and the smaller towns and villages suffer from a lack of sanitation and civic improvements, hospitals, and physicians. The kingdom is poor and struggling. The government maintains in Athens a university, which includes, of course, a college of medicine; but I thought the equipments primitive and meager.

However, I saw Athens at an inopportune time to judge of its civic enterprises. For at the time of my visit the Balkan war was raging, Greece was depopulated of able-bodied men, the university had become a barracks, the hospitals were taxed to receive the wounded who were every day being brought back to Athens from the front, and eye clinics were practically abandoned. We saw some purulent ophthalmia in Greece, but only upon reaching Alexandria, in Egypt, did we realize what a scourge the disease can become.

### Alexandria—"The Dirtiest City in Egypt"

Alexandria enjoys the distinction of being the dirtiest city in Egypt, and that is saying a great deal. This city has large commercial

and shipping interests and a considerable foreign population; yet, little progress has been made toward making it a desirable place of residence. It is situated on the sandy coast plain and is more or less hemmed in by the desert. A strong wind from the sea or from the desert seems always to be blowing, and the dry filth of the streets is swept about with the grit and sand at every gust.

It would seem that the natives almost without exception suffer from Egyptian ophthalmia and its varying sequelæ; on every hand we saw cases of chronic trachoma or of some affection of the cornea, such as leukoma, staphyloma, and anterior synechia. We had scarcely disembarked from our vessel when a dragoman, or licensed guide, with one bulging staphylomatous eye came up to offer his services to conduct us about the city. It is, in fact, a matter of some difficulty to find a native servant whose eyes are not more or less affected. Some of them go for treatment to the few English oculists who are located in the city; but a greater number of the natives seem to look upon ophthalmia and probable blindness as a sort of visitation of Providence. The clinics which are held are crowded to their utmost capacity, and, yet, the number of patients treated forms but a small part of those who go their way without ever seeking medical advice.

We found the same conditions prevailing in practically every Egyptian city we visited, with the exception of Cairo, where we saw far less of disease. But there are a number of reasons to account for this.

#### Cairo and Its Environs

First, Cairo is a great cosmopolitan city; perhaps in a sense the most cosmopolitan in the world. For it is the meeting-place of the East and the West. Then, its unrivaled winter climate draws to it every year thousands of travelers who come there to spend the winter months. And, because their money forms the source of support for no inconsiderable number of the native population, the latter must, of necessity, make some concessions to civilized demands.

As a result, Cairo is today not very different from the ordinary European city. It has broad, paved, clean streets throughout the European section, fair systems of lighting and transportation, a water supply, and a sewer system. Even the native quarters are fairly presentable, because these residents wish to draw to the bazaars European and American buyers. What there is of disease and filth—and there is enough of both—is less offensively conspicuous than it is in other cities of the Levant.

The country immediately about Cairo is very fertile and the city has no untoward amount of sand or dust to contend with. And, lastly, there are large forces of English troops quartered in the citadel, besides a fairly large resident European population. Kitchener himself, who has been no less assiduous in his efforts to upbuild Egypt than he was to subdue it, has maintained a residence in or near Cairo for the last fifteen years.

For these reasons, I think, the sojourner in Cairo sees less of Egyptian ophthalmia among the natives of the city. But in all the eye clinics—and there are in Cairo about a half dozen very capable oculists—Egyptian ophthalmia or its sequelæ form some eighty or eighty-five percent of all the cases. And in treating disease the physician not only has to contend with existing pathological conditions, but with the ignorance, poverty, and filth which engendered and which perpetuate those conditions.

If Cairo is making, year by year, long strides toward cleanliness and the safeguarding of public health, certainly this cannot be said of Palestine. Here the ignorance and superstition of the people are coupled with the ignorance and superstition of the government. For Palestine is, of course, a part of Asiatic Turkey, subject to the misrule, or perhaps the lack of rule, of the Turks. Sometimes we were amused by the instances told us of official opposition to change or progress.

#### Sad Conditions Found in Palestine

But the inconveniences which the traveler in Palestine must undergo, and the depression he feels at the filth, hunger, squalor, poverty, and disease that surround him from the hour of his touching the shores of the Holy Land until with relief he finds himself on a vessel bound for Port Said, leave little room for other impressions. Whether we found ourselves surrounded by Moslems in the great mosque of Omar, or by fanatical wailing Jews before the ruins of the wall of Solomon, or by blind and maimed Christian pilgrims toiling to this shrine or that, we cherished the same conviction, that what all of them alike need is less religion and more boracic acid.

I visited with interest the only ophthalmic hospital of which Jerusalem boasts—a British hospital maintained by the old order of the Knights of St. John. I found in charge of the hospital two clever young British practitioners, Doctors Heron and Thompson, who, considering their meager equipment, are doing careful and thorough work.

Here they have no end of material. Their waiting-rooms are crowded daily with patients who come afflicted with every form of ophthalmia known to science, it seemed to me; and the doctors are making the most of their opportunities. For glaucoma, they were making La Grange's operation in some cases, and in others that of Elliot. In their clinics I thought that at least ninety percent of their cases were of Egyptian ophthalmia or its sequelæ. But among the large numbers they treated daily—from one hundred to a hundred and thirty—they met with a most diversified experience, which ought to give them some day an authoritative voice in British ophthalmology.



# The Conflict of Conscience

By CHARLES GILBERT DAVIS, M. D., Chicago, Illinois

*EDITORIAL NOTE.—This month Doctor Davis completes this most interesting article, which has already run through two issues. In this installment he gives his remedy for the burdened conscience, which (as is shown) is a most potent cause of disease. The remedy is—confession. Learn from Dr. Davis what confession can do for the patient, and why doctors should learn to be "confessors."*

Confess your faults one to another,  
that ye may be healed.—THE BIBLE.

### III. THE CONFESSION

IS IT possible that in this storm and stress of the conflict of conscience there gleams no ray of hope? Has nature abandoned her struggling offspring and the law of evolution become powerless before a foe that is devouring the advance guard of earth's sentient beings? What must we do to be saved?

Can we by any means still this warfare of the soul, drive back the phantom of fear, and bring peace, tranquility, and health to the stricken body and the trembling spirit? Let us see.

From the study of the psychology of man himself, we shall be able to find the key that will enable us to unlock the door of mystery.

#### Man Seeks Release From Burden

A burden, whether of the body, mind or spirit, is something from which we seek to be relieved. And usually we avail ourselves of the first opportunity for relief.

If it be of the body, we seek physical means; if of the mind, we may employ logic; but when the spirit is wounded we seek sympathy, love, and forgiveness.

In order to find a pathway to the relief of a burdened conscience, we resort to confession and its consequent sympathy. A real, deep, genuine, heartfelt confession opens the flood-gates of vitality, brings happiness and health. It restores the equilibrium of the internal secretions and heals the wound. It is the gateway leading from the bloody field of carnage to the green fields of peace; from a rock of torture to tranquil rest; from darkness to light; from disease to health; and from guilt to forgiveness and to God.

Every man who in his relation to himself or his fellow men violates his standard of right or wrong suffers from this conflict. His error becomes a burden and he is forever seeking to find relief by confession. If he finds it not, the conflict terminates in disease of body or of mind.

To seek confession for soul-sickness, is as natural as to seek water to quench physical thirst. This law is as normal as mathe-

matics. It is as relentless as fate, and upon a perfect understanding of it depends the progress and success we may hope to possess in our endeavor to relieve the present burdened condition of humanity. No crime is ever committed, no vice is ever indulged, no sorrow is ever hidden away but what the oppressed mortal hopes to find relief through the confessional.

What course he may pursue to find relief, will depend much upon what has been his previous education and environment. He may seek ecclesiastical counsel, or unbosom himself to his friend, or stoically clasp the poisoned arrow to his breast and suffer and die.

#### Not to Confess Spells Disaster

But as sure as the conflict remains, he will be oppressed. If he holds it in his conscious thought, he will be afraid, and fear disturbs the internal secretions and produces disease. If he succeeds in partially concealing his vice or crime from his own conscience, he will develop a neurosis or a psychoneurosis and mental instability, with a possibility of complete dethronement of reason.

We have practical evidence of the benefit of the confession in the church. In a mixed community there are fewer suicides among those who attend confession. Recent investigations in Germany indicate that the diminishing birth rate is more noticeable by a large percentage among the Protestants than the Catholics. Minister Dr. Kerschner attributes this to the confession.

There is, possibly, no experienced physician but who has recognized the improvement following the confession of an invalid.

I have seen a girl who had wandered away from the home and church, her body saturated with disease and her soul crushed by fear from her burdened conscience. After hearing her story I have quieted her fears and sent her back to her church. And I have seen that girl rise from her dead self and with glowing face and shining eyes walk the pathway of health and virtue.

I have known a young woman raised in the purity of a country home to be overwhelmed by the tide of sin in a great city and become a

physical and mental wreck. I have heard her confession, with all the depths of her soul revealed, and then I have returned her to her pastor and her church, and watched her year by year as she rebuilt the fortress of her life and character.

It has been my custom for many years, when treating chronic mental or physical ailments, to go back to the emotional centers, to discover the initiative trauma from which sprang the impulse promoting the illness. While pursuing this method I have had the good fortune to observe many remarkable recoveries. I have encouraged the confession before severe surgical operations, with great success.

#### Hope of the Race in the Confessional

I am convinced that in the confessional lies the greatest hope for improving the race. No form of psychoanalysis can ever take its place.

Man is naturally religious, and will always be so, in spite of any amount of morbid theology. Any man who is not religious is abnormal; quite as much so as one born without limbs or deficient in his mental faculties.

The religious impulse is the most powerful in the human soul, and in it we shall find those dynamic forces to lift man to his highest ideal.

The clergy can do much to aid us in this matter, but I believe a still greater benefit may be experienced through the efforts of the skilful and educated physician who understands psychology and the deep relation of emotion to disease. He may well be considered the more capable in receiving that full confession which gives complete relief to the agonized body and soul.

The dipsomaniac may confess his drunkenness to his religious confessor, but with his physician, under questioning, he goes further and confesses his half-forgotten error, his suppressed complex, of years ago that drove him to the relief of alcohol. As previously stated, I am satisfied that a majority of these periodical drinkers are suffering from submerged conflicts, and alcohol becomes a physical necessity.

The world-wide craving for alcohol is caused by the conflict of conscience. The universal and proper application of the confession will restore mankind to temperance and eliminate the destructive action of alcohol on the nervous system.

I have relieved many from this condition through a deep and thorough confession.

I regard the confession as far beyond any mechanical method or so-called psychoanalysis. While from psychoanalysis, with its detective methods, one may trick the patient into a revelation of some of his misconduct, in the confession we have a complete, willing, and conscious opening of the doors of the inner life. The patient himself breaks down all barriers and pleads for forgiveness.

To the patient in whom I suspect a conflict of conscience, I suggest a complete confession. Sometimes it is given at once, but usually later after reflection. Some I send back to church. Others I dismiss with the assurance of forgiveness when there is deep repentance and an attitude of mind positively prohibiting a return to evil ways.

Says Emerson: "Absolve you to yourself, and you shall have the suffrage of the world."

And there are great souls who do this, but the ordinary mortal requires help while passing through this new birth.

#### How Some Burdened Souls Were Saved

Twenty years ago, one evening at 11 o'clock, I was sitting alone in my office studying. I heard light footsteps in the hall and then a gentle tap on my door. I opened it and was confronted by a young woman. She was draped in a long black cloak and hood, which accentuated her white face and sunken cheeks. I recognized her as a patient I had been treating for several months.

She was emaciated, anemic, had bronchitis and possibly phthisis. Numerous mental symptoms indicated an approaching psychosis. But beyond these symptoms I recognized the conflict of conscience grinding her body and soul. I had repeatedly appealed to her to tell me everything, assuring her it would give her wonderful relief. And that night she held out her white hand to me and gasped: "Oh, doctor, God help me, I was on my way to the lake to end it all. I saw your light in the window and it seemed to call to me. I have come—I will tell you all—you must save me."

For three hours I listened to her story. It is not necessary to relate it here. Remorse had been followed by a broken spirit and a diseased body. The submerged conflict was brought to the surface with tears and heart-rending sobs. But joy for the first time came to the face when I pointed to the new way, the new life.

She gained fifteen pounds in weight in the next three months. She was a talented woman. Later I heard her speak from the pulpit of one of our churches on a sociological

subject. She is now doing a great work in the Orient, and I saw her name in a magazine lately, the writer speaking of her devotion and heroism. Since the night of her confession there has been no relapse, no retreat from her steadfastness of purpose.

Is not such an example sufficient to point the way for the rescue and cure of thousands of others? I might have treated this woman until doomsday with iron, strychnine, and codliver-oil, but I am sure I never could have cured her without lifting the load from her burdened conscience.

Running back through the centuries, we find an old aphorism which says, "An honest confession is good for the soul." I am thoroughly convinced the truth of this assertion can be maintained by scientific demonstration. I most earnestly recommend to the medical profession the confession as a means to promote health and happiness.

Of course, it all depends upon what attitude of mind the patient maintains toward the confession. A confession wrung from a victim under torture would not be likely to yield beneficial results, either mentally or physically. Neither can we expect great improvements when the same is obtained by any system of cross-questioning or psychological jugglery. The confession, to yield results, must be spontaneous, unhampered, free, and with an attitude of mind seeking forgiveness, with a firm resolution for steadfast conduct in the future.

Under such conditions, and no other, are the vital currents released that give relief and create harmonious development of the entire man. I am satisfied that the confessional will ultimately become one of the most important elements of our educational system in the future.

#### The Confessions of Childhood

One of the earliest destructive elements that seizes upon the young child is repression, a covering up, concealing or hiding away from its elders, of thoughts, incidents, and complexes which it is either ashamed or afraid to reveal. These lie dormant, to work havoc in the coming years. Consequently, the earliest confessions should be to the mother. Not more than one mother in a thousand is fit to receive the confession, but they must be educated for this office.

In all my experience as a physician, I know of no greater safeguard that can be thrown around the young child than that it should, each evening, reveal to its mother every thought and act of the day that has passed.

This confession to the parent may continue through the years of childhood and youth. Later, the teacher, the guardian, the minister, and the physician will be called upon to perform this sacred office.

Yes, I call this sacred, for the one who fills this office must enter into the silent secret chambers of the soul. It is the sanctuary of the Most High.

To relieve this burden, to banish fear and cure disease, we must employ the confession. And he who acts in the capacity of the confessor must be made fit by cleansing his own soul. He must be healthy, wise, and religious, and must have that deep love of humanity that will go out and beget trust and abiding confidence.

This new education will be the renaissance of real religion, the religion that recognizes all truth as holy, all science as of God.

#### IV. THE ULTIMATE REMEDY

Religion is the basis of civil society.—BURKE.

There never was a time since the dawn of history when the human brain was as restless as it is today. The world is vibrant with revolution as man is seeking to free himself from his burden.

Somewhere in our civilization there is an error. There can be no doubt but that we may be able to allocate the prime error to the neglect, bad management, abuse, and deficient training of the child. If we would rescue humanity, we must begin here; this is the fountain-head from which rise the currents that give origin to the deficiencies we observe socially, economically, politically, and religiously.

Our present methods of education are deficient, wrong, monstrous—"a sounding brass and a tinkling cymbal." Man is a threefold being, and his education should be directed accordingly.

Physically, the child should be taught the hygiene of his own body and the laws that govern it.

Mentally, it should be instructed in relation to matter and the various departments of science.

Spiritually, it should be brought in harmony with the evidence of a Supreme Being, the immortality of the soul, and the brotherhood of mankind. The child should be taught that all avenues of life lead to the Divine and that all that is is sacred.

The child should not injure its body nor its mind, and, above all, it should not violate its conscience and produce those traumatisms of the soul that scar far deeper than the



wounds of the body. Our educational system evidently does not fully recognize these essentials of education. If our universities really do attempt to develop the moral faculties, they are woefully unsuccessful. Our youths return from college—too many of them—with not only their morals depraved, but the mentality dwarfed and their physical bodies saturated with nicotine, alcohol, and syphilis.

If in the future we are to raise men and arrest the tide of degeneracy, we must improve our methods of education. I am not speaking from the sentimental point of view, but I do regard this subject as of the utmost practical importance.

#### Religion and Life

I am a scientist; but there are some things we must admit are beyond the ken of dogmatic, mathematical calculation. Emanuel Kant did much good with his "Critique of Pure Reason," and he also did much harm by discouraging investigation through the aid of the imagination and intuition. Kant recognized the phenomena of nature, but he forgot the numena. *We must admit today that religion is essential to the welfare of physical life.*

The time has arrived when science and religion must join hands for the rescue of the race. In other words, science must become religious, and religion must henceforth express itself in scientific terms.

As far back as history extends man has not been able to be happy, nations have not been permitted to exist and races have not progressed without a strong religious belief. In fact, in all instances where the belief in God and the immortality of the soul has departed from a people, it has been an evidence of national decay. This craving for the higher ideal, this searching of man through centuries for his God is not without a meaning, and it will not cease until it fully manifests its purpose.

Fear, by its action upon the internal secretions, is producing disease and premature death. Evolution of the human form and spirit can not progress till we have banished fear.

In the development of true religion we shall find relief. There is no fear like the thought of separation from God. There is no joy like the assurance of oneness with Him.

Let us have the confession in the training of our youth, and by this improved method of education we shall soon begin to see a solution

to all the various questions that now stand in the way of progress.

The wild storm of stress, worry, and fear that now sweeps the nervous system of humanity will be stilled. It will be followed by a noble calm full of an undreamed-of strength and beauty. Then we no longer shall be compelled to employ nicotine and alcohol to increase our complacency or to repress our morbid complexes. Chilling fear will no longer congeal the fountains of joy and health. Degeneracy will disappear. The battle-fields of war will blossom with the flowers of peace and the energies that once were used to destroy will be utilized to create. The aspirations of mankind will be turned toward the study of the Infinite.

Science and religion will walk hand in hand, and when a new discovery or revelation is made, either in matter or in spirit, the bells of the cathedral will be rung and the multitude will sing peons of praise and glory to God in the highest. Man will "look through nature up to nature's God."

We must have a renaissance of religious faith. We have had too much of ritual and dogma. What the world needs is a practical universal religion, wherein it shall be demonstrated that real religion is not ceremonial but spiritual; one that we can carry into every expression of life; one that glorifies our lives by casting out fear, stimulating every gland and cell in the body, and sending the rich red blood, freighted with health and happiness, pulsing through our blood-vessels.

#### What the Universal Religion Will Be Like

Let us have a religion based upon these three cardinal propositions:

1. The existence of a Supreme Being.
2. The immortality of the soul, giving a basic belief and reason for the aim and purpose of life.
3. The brotherhood of mankind, linking all humanity in one bond of mutual aid.

The recognition of a Supreme Being is the basis of a belief held by all the world. It is generic in humanity. The hope of immortality has brought more happiness than all the philosophies preached by man. Without a recognition of the brotherhood of mankind there can be no abatement of selfishness, no relief of the oppressed, and consequently no progress.

The American Medical Association should, by resolution, adopt these three propositions as a platform. It would accomplish more for the restraint of viciousness and the promotion

of health than any effort they have made since their organization.

The nations of the earth should at once hold an international religious congress and determine by mutual agreement what we may incorporate in our educational systems and wisely and safely teach our youth. The extent of this teaching would increase from year to year and ultimately result in a universal religion.

This subject could be promoted by the Universal Races Congress that was organized in London, in 1911. I believe that the adoption of this platform as a basis of belief could be accepted by mankind in general. It would be broad enough for all the world.

Let us recapitulate:

1. Owing to the conflict of conscience, the world is full of fear that is destroying humanity.

2. The immediate relief from this fear-obsession is through confession.

3. The ultimate and permanent destruction of fear must be sought in a deep, sincere, and proper religious training joined with confession.

Two thousand years ago the Preacher by the shore of Galilee taught the existence of a

God, the immortality of the soul, the brotherhood of mankind, exhorting us to be not afraid; and assured us this was the whole law and the prophets. This way leads to health, happiness, life—evolution. Let us follow Him.

1. *Skandinaviske Arch. d. Phys.*, 1904, XV, 248.
2. *Am. Jour. Phys.*, April 1, 1911.
3. *Am. Jour. Med. Sci.*, Jan., 1913.
4. *Berlin. Klin. Woch.*, V., 48, p. 519.
5. Forbes Winslow, "The Insanity of Passion and Crime."
6. *Berlin. Klin. Woch.*, 1891, V., 28, p. 53.
7. "Modern Problems in Psychiatry," Ernesto Lugaro, p. 184.
8. *Bul. Soc. de l'Internat. de Paris*, 1909, p. 295.
9. *Bul. Soc. de l'Internat. de Paris*, 1909, p. 295.
10. *Berlin. Klin. Woch.*, 1912, XLIX, 1165.
11. "Pathology of the Emotions," Ch. Féré, Paris, 1892.
12. "Pathology of the Emotions," Ch. Féré, Paris, 1892.
13. "Pathology of the Emotions," Ch. Féré, Paris, 1892.
14. Leopold Levi and H. de Rothschild, Paris, 1911.
15. *Med. Woch.*, Nov. 16, 1905 (Bickel).
16. *Sociolog. Rev.*, July, 1908.
17. Münsterberg, "Psychoanalysis," p. 396.
18. Johannes Kubel, "Christliche Welt." (Marburg.)
19. *Am. Jour. Phys.*, Dec. 11, 1911.

## THAT I MAY KNOW

BY FLORENCE B. TUCKER

Oh, give me now, toil-worn and dust-beladen,

The flowers beautiful, enfolding foot and head,  
That soon or late, wet with your tears, you'll bring  
me

When I am lying there all still and dead!  
Oh, let me know their fragrance and refreshment  
Drink in to satisfy my beauty-craving thirst,  
Nor wait until my eyes, no longer holden,  
The glories of the kingly gardens burst.

Place not within my quiet hands the blossoms

That you have kept to honor death alone!  
But take them, bruised and weary, love-compelling,  
While they may cling responsive to your own.  
Pour out your warm, sweet vials of affection,  
When to its depths my anguished heart is stirred;  
Oh, speak me in my need your loving message, nor  
hold  
Until my ears are deaf to mortal word!

Bring not your frankincense and myrrh to burn for  
me

When I am gone beyond all blame or praise—  
But on the living altar light a flame to cheer  
My lonely vigiled nights and care-filled days;  
Perchance, you'll kneel beside me, lowly lying,  
And whisper tender words of pity for mistake—  
I pray you now, in my despairing hour—dearest—  
Your precious box of alabaster break!

# The Art of Defecation\*

By RALPH ST. J. PERRY, M. D. Farmington, Minnesota

FOR many years past we have bemoaned our deprivation of the so-called lost arts, such as the tempering of copper, the manufacture of Damascus steel and of the tough nonbreakable glass of the ancients. But in all of our lamentations we hear no wailings over that most important of all the lost arts—the art of defecation. Those arts which we are accustomed to consider as lost could more aptly be termed the abandoned arts, for each of them has long since been supplanted by better means. No tempered copper ever had the hardness of our steel; no Damascus sword-blade ever had the spring of our common carpenter's saw; and the nonbreakable glass utensils of the ancients have been displaced by our metal and enameled ware. But no one has as yet succeeded in providing a suitable and efficient substitute for the art of defecation.

Defecation is the culmination of peristalsis, the final act in the nourishing of the body, whereby the unutilized portions of ingested matters are thrown out of the system. The act should occur once daily, though two or three movements per day are more conducive to health. Some individuals naturally defecate only once every other day, and still remain healthy. Any other variations in this function are to be looked upon as unnatural, abnormal or pathologic. The commonest of these abnormal conditions is that of constipation, or the defecation deferred.

Constipation in itself has no characteristic pathology. Its symptomatology, both immediate and remote, is too well known to call for any description. Of its etiology, I think I can safely say that fully ninety percent of the cases are due solely to habit; in the other ten percent, we find dryness of stool and errors of diet the chief factors. In some instances there may be a stenosis of the bowel or some painful, inflammatory or obstructive condition in the rectum or anus.

Perfection in the art of defecation depends upon four conditions, namely, a mass of feces, a desire to defecate, muscular activity, and an unobstructed bowel lumen; and the proper treatment of those who have lost the art requires, first of all, a recognition of the defective or missing condition, and then its restoration.

The once popular method of treatment followed in all cases of constipation, by administering cathartics or laxatives, is no longer considered a proper one. Such remedies will do for sporadic constipations, for emergency work or to initiate a course of treatment where it is desirable to make a quick psychic impression; but the long-continued use of such drugs is to be deprecated—Ayers, Jaynes, DeWitt, Castoria, Cascarets, *et al.* to the contrary notwithstanding.

The genus homo is probably the only group of animals that has lost the art of defecation, and so generally has this become recognized in scientific circles that "the female of the species" has been defined as a "constipated biped."

Now to the defective or missing conditions productive of constipation.

## The Intestinal Content Must Be Proper as to Mass and Quality

The mass of feces is something which depends upon the ingested matters, and it may be gaseous, liquid, solid or a mixture of these consistencies. If the fecal mass is sufficient to distend the intestines moderately, this distention excites and promotes peristalsis and the mass is moved slowly but steadily toward the rectum. Should the mass be of an irritating nature or the intestine unusually sensitive, we find the movement much accelerated and a diarrhea possibly is created. Should the mass be nondistending, nonstimulating, but rather sedative or astringent, in its nature, we are apt to have a constipation develop.

Errors in diet cause most bowel troubles, and the greatest of these errors is the eating of too concentrated foods. In looking over the advertisements of twenty food products, in a February (1913) magazine, it was noted that the claims to superiority of seventeen of them were based upon the concentration of nutriment and the absence of the so-called "waste matter." In fact, the tendency today seems to be to throw all this "waste" into stock foods and to feed humanity upon concentrated, ninety-nine percent pure antiperistaltic pabulum. Food manufacturers, as well as some of our cooks, apparently lose sight, or are ignorant, of the fact that this "waste" matter which *they* waste is the very essential part of the food that goes to make up

\*Read in part before the Park Region Medical Society at Alexandria, Minnesota, Jan. 8, 1913.

the bulk of the stool, to promote peristalsis and make defecation a possibility.

Possibly it could be truthfully said that nearly every case of up to date constipation has involved in its etiology this error of diet. To correct it, correct the diet. Fruits—fresh, canned or dried—contain acid elements which upon coming in contact with the alkaline secretions of the intestines cause gases to be evolved, thereby distending the bowel and exciting peristalsis. The ingestion of the coarser foods which have not been bolted or put through other similar processes—such as the whole-wheat, oat, and barley products, and meats, vegetables, milk, butter, and eggs—will materially aid in increasing the bulk of the feces.

A "food" which I have used successfully in many cases during the past several years is crude agar-agar, the sea-weed gelatin of the East Indies; a heaping tablespoonful of the granulated product being taken morning and evening with a little sugar and cream, like oat-meal or cracked wheat. In the alimentary canal the agar-agar absorbs moisture and swells the bulk of the stool. It does not dissolve nor does it seem to be digested and absorbed like calves'-foot gelatin (the ordinary kind), but passes through the canal, acting as a peristaltic stimulant, a lubricant, and a vehicle for the liquid contents—which too often are absorbed, bringing on a condition of autointoxication.

Spinach, beets, greens, sweet-corn, hulled corn or hominy, dandelions, cabbage, and beans are bulk-forming vegetables that can be had at all seasons of the year, either fresh, canned or dehydrated. Olive oil, cottonseed oil, and peanut oil, all in purified edible form, are not only good foods but excellent lubricants to the intestinal tract. They can be taken "straight" or mixed with other foods in the form of salads and dressings. Potatoes, rutabagas, turnips, parsnips, carrots, and other root foods also help to form bulky stools.

#### Importance of Rectal Sensibility. The "Magazine" Treatment

The desire to defecate, which is an essential factor in the art, in most constipated persons has been extinguished or diminished through the habit of postponing the act of evacuation at those times when nature suggested such an act as being desirable and propitious. Constant repetition of this postponement results in a dulling of the sensibilities and a muscular inertia. Many persons thus affected I have cured by what I call the magazine-treatment.

This method involves a water-closet that is comfortable at all seasons of the year, and, in addition, a magazine or other reading-matter that is interesting. By a comfortable water-closet, I mean one that is dry, clean, odorless, well ventilated, cool in summer, warm in winter, and which has a seat of proper height and size and shape to fit the gluteal portions of the active party. With such facilities at hand, my patient is instructed to assume the proper defecatory attitude, open the magazine, and read and read and read, and patiently await the moment when nature takes its course; it may be ten minutes or it may be an hour. The first few seances may be unsuccessful, but sooner or later the peristaltic Billikins will get busy, the constipation hoo-doo will vanish, and the soul will be filled with that joy which comes from a good deed well done. This magazine-treatment is a waiting game and calls for persistency, but I have never known it to fail to bring its reward in the end.

Just a word concerning the facilities and the attitude. The time has passed when a fence corner is a suitable *locum defacatorium*. Such aereated and zephyrous spots were all right in the days of 4004 B. C., when Adam and Eve were functioning; but matters have changed since then, esthetically, legally, and board-of-healthly.

Today the water-closet should be weather-proof, erected in a place protected from storms and public eyes, connected with a septic-tank system, and provided with the necessary requisites for the after-toilet. Most urban homes are connected with city water-works and the water-closet is indoors and connected with a sewer, but in the country the denizens of the farm and village must rely upon less convenient ways.

Many of the rural population are afraid of a septic tank simply because they do not know how easily and cheaply one can be built. The Department of Agriculture has published a Farmers' Bulletin which fully explains and illustrates several practical forms of the septic tank.<sup>1</sup> Send for it, addressing the Secretary of Agriculture, Washington, D. C.

In the days of Eden, when the members of the first families of the garden retired to the depths of the corn-field, they assumed a squatting attitude, thereby bringing to their aid the pressure of the thighs against the abdomen. This position in defecation I believe to be the natural one, and the present-day construction of water-closet seats is faulty in that it prevents this attitude. Some

<sup>1</sup>See also back volumes of CLINICAL MEDICINE.—ED.

plumbing genius has put upon the market a closet with the seat at an angle that enables one to assume the pristine position without bending the torso to a horizontal. Consult your plumber for further details.

#### The Abdominal Musculature Must Be Unimpaired

Muscular activity is wanting in many persons troubled with constipation, especially in women who have borne children or who have abused the corset-wearing habit. To restore the muscular tonus, we have recourse to massage, gymnastic exercises and electricity. All such measures should be carried out by and under the direction of a physician, and in such dosage as is suitable to the patient's general health, strength, and physical condition. By way of more specific elucidation, let me elucidate specifically.

**Spinal massage:** Have the patient—bare-backed or with a thin cloth waist only—seated on a low stool, with back toward you. With the ulnar edge of the hands rapidly percuss the roots of the spinal nerves, going up and down the sides of the spine, one hand on either side and devoting most of the efforts to the sacral, lumbar, and lower dorsal regions. Two minutes.

**Breech beating:** With the patient standing, place the left hand on the patient's abdomen as a support and with the loosely clenched right hand gently beat the lumbar muscles from the ribs to the sacrum and from the gluteal muscles to the thighs. Do this slowly, firmly and with deep pressure. Two minutes.

**Vibration** may be applied to the involved muscles by the hand or by mechanical appliance. Hand vibration is accomplished, not by rapidly beating the part, but by laying the open hand on the extended fingers over the spot and then rapidly shaking or vibrating the hand *in situ*. I believe this form of vibration often to be more effective than mechanical work. Two or three minutes is sufficient.

**Body torsion:** The patient sits on a stool and twists the body slowly from one side to the other. This is done two or three minutes without restraint, and then for one or two minutes in opposition to the resistance of the physician or nurse, who grasps the patient's shoulders and "pulls against" the torsion.

**Body bending:** The patient stands with heels together, toes out, hands on hips; bend body at the hips forward, backward, and to each side. Two minutes.

This series of movements, followed out as here given, will cover a ten- to fifteen-minutes' treatment, which, if repeated daily, will be all that the average patient can stand or will require, and, if faithfully carried out, will do much good and materially aid in effecting a cure.

#### Intestinal Obstruction as a Cause of Constipation

An unobstructed passage is found in nearly all cases of constipation, although occasionally there may be a stenosis of the bowel or a tumorous growth. The commonest obstructions is an impaction of feces, the result of the constipation rather than a cause. These impactions can be softened by injections of soap-suds, olive-oil, cottonseed-oil or crude petroleum (or black oil),<sup>2</sup> then broken up and moved by massage of the colon and faradic stimulation of the muscles.

In giving injections of oil, let the patient take a pint or two of the oil while he is in the dorsal recumbent or left lateral position, then follow immediately with a quart of warm water, with the patient gradually rising to the sitting posture. By so doing, the oil is floated on top of the water up into the colon, where, by body movements and gentle abdominal rubbings, it can be made to reach all of the remote fecal masses.

Massage for breaking up and moving impactions should begin with a spinal percussion as detailed above; then, with the patient on the back, start in the lower left groin with a gentle rolling, kneading movement and follow the colon up to the ileocecal valve. Repeat this several times, each time a little harder than before. A séance should not extend longer than five minutes.

Hemorrhoids, fistula, fissure or any other pathologic factor which renders defecation painful, and so conduces to bring on a constipation or aggravate an already existing one, should be overcome.

[Dr. Perry's suggestions are fine, and should help greatly in the management of intractable constipation. However, massage may come and bran may go, but pills go on for ever. Medicinal treatment, while sadly abused, is still indispensable. Let it be intelligent, carefully fitted to the patient's needs and associated with the excellent expedients herewith suggested.—ED.]

<sup>2</sup>Also by ordinary coal-oil, or kerosene.—Ed.



# Some Fallacies in Regard to Contagious Diseases

By JAMES E. STUBBS, M. D., Chicago, Illinois

*EDITORIAL NOTE.—Doctor Stubbs is a good deal of an iconoclast, but his iconoclasm is so strongly saturated with common sense that it is hard to escape from his conclusions. The problem that he raises is this: Is our present method of combating the spread of the contagious diseases founded on sound scientific reasoning, or is it the survival of an old superstition? What do our readers think? We want their opinions.*

"That which cometh out of the mouth, *this* defileth a man."

Dead things make no disease.

That which is dead giveth no life.

MAN is prone to superstition, just as sparks are to fly upward. Dangers we can not see we fear. All men are cowards in the dark, and we are in the dark in regard to the contagia of diseases. Hence, the absurdity of our laws as to quarantine. These laws work hardships on the poor, when strictly enforced, and are futile as to preventing the spread of disease. The deeper we are in ignorance and superstition, the more irrational we are in trying to avoid dreaded diseases.

The believers in Christian science are more sane as to the spread and contagiousness of disease. Disease with them is only an error; with the mass of mankind it is an absolute fact easily realizable. Laymen all believe in the carrying of contagium in clothing, paper, letters, books, and the like, and it is hard to disabuse their minds of the fallacy; for a fallacy it is. The medical men who ought to know better are as bad as the masses, if not worse. It is hard for them to give up an old dogma.

It was once thought, and believed, that the earth was a great level plain surrounded by water; that on its surface were mountains, rivers, lakes, animals, and the whole resting on the shoulders of an old mythological individual by the name of Atlas, his feet on the back of a turtle and the turtle floating in space. What a burden the old man had to bear! It took thousands of years to get this fallacy out of the minds of the people.

## Superstition Dispelled by Science

Many things have been taught as truth, and we accepted them as truths, when scientific investigation disclosed the fallacy of the belief. Facts of today become fictions tomorrow. It once was taught that malarial fever came from breathing bad, foul air; that it was carried in the mists and fogs arising from swamps, marshes, and stagnant

water. Now we know that the anopheles mosquito is the spreader of this disease.

Once we believed that the virus of bubonic plague was carried in clothing, in fomites, the air, and so on. Now, however, research and the microscope have opened our eyes and we see that the rodents—rats and the ground-squirrels—are the reservoirs from which the flea draws the germ of the disease; and, as fleas have a strong liking for the blood of man, he takes his first opportunity of vaccinating every individual of the genus homo to whose body he gains access.

Once we believed that yellow-fever was spread over certain portions of the world by the wind; and this carried the germs, which got into clothing, into letters, books, the holds of ships, the fur of animals, the feathers of the birds—all this was the result of evil spirits. We know better now.

More than sixty years ago Dr. J. C. Nutt, a well-known physician in the South, believed and stated that his observations led him to believe that the mosquito was the conveyor and purveyor of the virus of yellow-fever. During an epidemic of the fever he was in New Orleans and made a "post" examination, and then and there declared to Prof. Chaillé, in this terse statement, "Chaillé, I'm damned if I don't believe it's bugs."

## The Mosquito and Yellow-Fever

It has been demonstrated as a fact that the mosquito, who prowls about by night only, just like his prototype, the holdup-man, the assassin, the burglar, is the agent of the evil spirit and his occupation is, to inject the virus of yellow-fever into the blood of every man, woman or child that unwittingly gets into his habitat, and at once—does not wait for an invitation—proceeds to vaccinate his victim. Again, it is that which proceedeth out of the mouth that defileth man.

Gunshot quarantine one time was established from the Mississippi River, starting a short distance above Memphis, eastward to the mountains, and wo betide the man, woman or child caught crossing the dead line,

for he was sure of getting his body filled with cold lead. But when the medical man of intelligence, observation, and research got right down to hard work, he located the culprit, and with a few barrels of petroleum he soon put a quietus on Mr. Stegomyia.

What fear spread through the land when a case of "Yellow Jack" was reported at New Orleans, Key West, Cuba or Mexico! All our southern seaports were quarantined and no vessels or railroad trains were allowed to enter or depart. Those days have passed. We know more now. Knowledge casteth out superstition. Man is superstitious through ignorance.

#### How the Infection was Traced to the Mosquito

Out of the mouth proceedeth that which defileth man. The fact has been thoroughly established that the stegomyia mosquito is the vaccinator of yellow-fever. This was proven at the cost of the sacrifice of human life; but at the same time it was demonstrated that man is the reservoir containing the virus of the disease. Under the direction and supervision of Carlos Finlay, Jesse Lazear, James Carroll, and Walter Reed, all except the first of the United States Army Medical Service, a series of tests were made. The following was one of the tests:

John Kissinger and John J. Moran, both privates of the U. S. Army, went into a room that had been fumigated and from which all mosquitoes had been driven out. Then they let loose a number of stegomyia mosquitoes, and these soon began their deadly work. The two soldiers had on only night-shirts, so that the vaccinators had a perfect field for operation. Both of the men were bitten from twelve to fifteen times. In due time, both were attacked by yellow-fever, although, happily, both recovered. No reward was offered them, nor did they receive any. Considering that at that time yellow-fever was considered the most contagious and infectious and most fatal disease known, they gave an example of moral courage greater than ever was known. We are proud that our country has such men.

Robert P. Cooke, U. S. A., and six privates were housed in a room 14x20 feet for twenty nights, and their bedding was the linen and underclothes, shirts, and bed-linen taken from the dead bodies and bedding of persons who had died of yellow-fever in the hospitals. These fomites were smeared with the secretions of the sick and dying men; and the odor from those fomites, it is written, was abominable. These seven men unpacked

those dirty, disease-laden clothing and bedding, shook them out, and made beds to sleep in. All mosquitoes were driven from the room before the men entered, so that there was no opportunity for them to become infected from that source. For twenty nights and days they lived and slept in this compartment, but, like the three Hebrew children in the fiery furnace, they came out in perfect health without the smell of the disease left on them; and they remained in perfect health afterward. Did the world ever see such heroism? They risked their lives for humanity.

#### How This Nation Shows Its Gratitude

The test was made also on Drs. Lazear and Carroll. Doctor Lazear died as a consequence, vaccinated by the stegomyia mosquito. At a later date 8 persons took the test: 3 died; one of them, Miss Clara B. Maas, a nurse. Herves are not always men.

Without these experiments, these sacrifices, the Panama Canal never could have been built. After that, it became a possibility. Will the world and commerce be benefited by it? Who doubts? Out of the mouths of the stegomyias thousands of lives were annually gathered to the city of the silent majority. Again it was proven that fomites do not carry contagium.

I will digress a little, to see how a democratic government treats its civil heroes. For the benefit of Doctor Lazear's widow, Congress at first appropriated the sum of \$17.00 per month, with \$2.00 additional for each child up to the age of sixteen. What munificence! In May, 1908, Congress had remorse of conscience and raised the amount up to the princely sum of \$125.00 per month, including children and all. What prodigality! Why, it is not uncommon for our Billion-Dollar Congress to appropriate \$100,000 to clean out some duck-creek, so that a fleet of scows might navigate said creek—and for what?

Doctor Reed died in November, 1902, and four months after (note the haste) Congress granted to his widow the kingly sum of \$125.00 per month. What a burden on the United States! Doctor Carroll died in September, 1907. In six months, this liberal Congress bestowed upon his widow a pension of \$125.00 per month. What a benevolent government!

Kissinger's health failed to such an extent that he had to be supported by his wife. Shame on such a Congress, to allow such a thing to happen. Necessity compelled friends

to make application to Congress for help. Now note—our liberal, generous Government granted him \$12.00 per month to support *two*. How kind! How liberal! How sacrificing! Shame! In three years he became a hopeless paralytic. Just see how quickly a democratic government hastens to relieve the distress of one of its heroes. They first granted to this helpless man and his faithful wife—how much? \$125.00 per month. Some of the multimillionaire congressmen thought that was too much, likely to bankrupt the Government, so, had it reduced to \$100.00 per month.

Mr. Moran tried to get a medical education, funds failed, and he had to give it up. As a compensation for his heroism, the Government gave him a *job* on the Panama Canal. How thoughtful, how considerate, to one who helped to make the canal a possibility!

Scott and his companions went to the South Pole. None ever returned. They saved no lives, did nothing to benefit mankind; but just for their pluck England did not forget their dependents. She supplied them with a great abundance that will make them independent for life. Britain gives pounds, United States gives dimes. What a good and glorious thing it is to be a citizen in a democratic government! Here it is every man for himself and the Lord for us all, and these heroes made the *great* work of modern times a possibility and demonstrated that yellow-fever is not conveyed in fomites.

Out of the mouth proceedeth that which defileth the man!

#### The Role of Microbes and Vermin

The belief in signs and symbols frequently controlled the destiny of nations. The more wicked and fallen, the greater the belief in occult manifestations. An old prophet, observing the tendency of his people, said: "Oh ye wicked and adulterous generation seeking after signs," and we today have not gotten out of the habit. Since time began there has been no new creation. Bacteria have existed from the beginning. Every organized thing has its natural habitat, and there it lives in the full enjoyment of its nature.

Nature keeps the balance in the animal kingdom. One genus becoming extinct, man has to make up the loss by destroying that which that genus had been destroying. One species can not become extinct without the unbalancing of nature in its natural condition. Only when civilized man reigns can this be done. If all microbes were to be

wiped out of existence, in a very few years the earth could not sustain the vast population. Destroy the balance of the microbe world, and havoc would soon reign in the animal kingdom.

There are natural reservoirs for all kinds of bacteria, inhabiting the body, and here they do not do any material damage to their hosts, but when conveyed to a different, or unimmune body, or to one in whom the opsonic index is below par, then disease and death result.

#### Fomites Are Not Disease-Carriers

We would not believe one-tenth of the tales we hear in regard to diseases if it were not for the prevailing ignorance and superstition. Superstition is related to this life. We must unlearn what we have been taught in regard to the virus of diseases being carried in fomites. The question which concerns us all is, "How are these diseases transmitted?"

Doctor Hedges has contributed a short article to *Progressive Medicine*, on contact-infection, with special reference to scarlatina and diphtheria, in which he says: "From earliest times, it has been believed that these diseases are transmitted through the air and by fomites or objects which have come in contact with the patient. There is no doubt there is a growing opinion, based on careful scientific observation, that the dangers of transmission through the air are very slight." Personally we believe that it never is conveyed through the air or by fomites, any more than yellow-fever and malarial fever are thus disseminated.

"The transmission is most invariably accomplished by distinct contact with the individual who has the disease or who hath it and knoweth it not." Perhaps the greatest sources of infection are the so-called "missed cases," in which the diagnosis has not been made, and in the *carrier cases*. "In diphtheria and scarlatina, there has been the belief that the virus of both diseases could and did live after very long periods of time, and that under certain (favorable) conditions diphtheria bacilli may retain their virulence for months; but, under ordinary conditions they soon lose their viability." So says Doctor Hedges.

This has been thoroughly tested, by such men as Weichardt, Chapin, Williams, Kaher, and others, as to the shortness of the vitality of the bacteria of these diseases.

"Paper money would be a very great source of danger if the virus were carried in fomites; yet, careful study of bank-clerks, streetcar-

conductors, and cashiers shows that these individuals do not have scarlatina and diphtheria more frequently than do other classes of people, nor has there been any evidence to show that the employees of the U. S. Treasury Department who handle returned bills are more subject to infectious diseases than are other people under similar conditions. Scarlet-fever and diphtheria certainly do not fly through the air, so that there is practically no danger through this source." (*Progressive Medicine*.)

"Scarlet-fever and diphtheria can be treated in open wards in any hospital, without any danger of contaminating other patients, if ordinary care is taken by the physician and nurses. As to the room, thorough cleaning, by ordinary means, is probably all that is needed; although, of course, disinfection by formaldehyde or sulphur may help. It will allay a certain amount of nervousness in others, as they have been wrongly taught in the past." (*Progressive Medicine*.)

We might learn something from the Christian scientists in this respect. "As ordinarily carried out, some inspection is more or less a farce, and everyone who knows about it at all and has observed the manner in which it is done will agree with me; but it makes the inmates feel more comfortable." Ignorance

is bliss, why be wise? The ostrich feels more secure with its head in the sand when in the presence of the enemy.

"For the last two years I have given up using disinfectants for the hands and substituted thorough scrubbing with soap and hot water—all unnecessary, except for cleanliness. I am certain that, in spite of almost daily contact with infectious diseases, I have not been the means of transmitting them in a single instance. I also think that medical students and physicians should be taught exactly how to prevent the spread of diseases and to stop the use of measures which are apt to be misleading and give a false security." (*Progressive Medicine*.) I have thus taught and practiced for the last twenty years, and I can truly say that I never have known of any contagious diseases following in my wake, I being the conveyer of the contagium.

My observations make me conclude that physicians, as a whole, are the most set in their beliefs of any class of people, except it be the clergy. As for most of the physicians, when once they are taught and have accepted a dogma, all heaven and earth can not get them out of the rut. A physician who never changes his beliefs is a mossback; and a mossback is worse than a grayback.

(Concluded next month.)

## COLUMBUS

By JOAQUIN MILLER

Behind him lay the gray Azores,  
Behind the gates of Hercules;  
Before him not the ghost of shores,  
Before him only shoreless seas.  
The good mate said, "Now must we pray,  
For lo, the very stars are gone;  
Brave Admiral, speak, what shall I say?"  
He said, "Sail on and on and on, sail on."

They sailed and sailed as winds might blow  
Until at last the blanched mate said,  
"Why now not even God would know  
If you and all your men fell dead;  
These very winds forget their way,  
For God from these dread seas is gone;  
Brave Admiral, speak, what shall I say?"  
He said, "Sail on and on and on, sail on."

They sailed and sailed, then spake the mate:  
"This mad sea shows his teeth tonight,  
He curls his lips, he lies in wait  
With lifted fang as if to bite;  
Brave Admiral, say but one good word,  
What shall I say when hope is gone?"  
The answer leaped like a leaping sword;  
He said, "Sail on and on and on, sail on."

Then pale and worn he kept his deck  
And peered through darkness. Ah, that night  
Of all dark nights, and then a speck;  
A light! A light! A light! A light!  
It grew, a star-lit flag unfurled;  
It came to be time's burst of dawn.  
He gained a world, and gave that world  
Its grandest lesson; On and on and on, sail on.

# What Others are Doing

## CHRONIC PNEUMONIA CURED WITH THIOSINAMIN

Two injections of thiosinamin (fibrolysin) completely cured in one week a patient of an obstinate chronic interstitial pneumonia ("chronische lungenentzündung"), according to Brenner; who thus writes in the *Muenchener Medizinische Wochenschrift*, 1913, page 1547.

## STEROLIN: A HAND DISINFECTANT TO REPLACE RUBBER GLOVES

In the *Chemiker-Zeitung* (1913, p. 1247) there is described a liquid for disinfecting the surgeon's hands, so that rubber gloves may be dispensed with; the formula given being: acetic acid, Gm. 2; castor oil, Gm. 2; Peru balsam, Gm. 3; strongest alcohol, Gm. 93.

The surgeon thoroughly wipes his hands and wrists with wads of absorbent cotton wet with the liquid, continuing about two minutes, and taking a fresh bit of cotton every time he wishes to take up more of the liquid. After permitting the alcohol entirely to evaporate, he goes through the same performance. As soon as the hands have become completely dry the second time, operation may begin. In the case of inflamed tissues, a single such treatment is called sufficient.

The claim is made that this sterolin not alone washes away the superficial germs, but penetrates into the skin pores and there glues them fast temporarily. This is the magic "varnish" or "liquid gloves" astute newspaper reporters have been growing enthusiastic about lately.

## TREATMENT OF PNEUMONIA

There are several interesting articles upon the treatment of pneumonia in the December, 1913, number of *The Medical World*. We are particularly interested in the experience of Dr. Solomon Solis-Cohen, who uses massive doses of quinine every three hours, administering with it 15-minim doses of pituitrin (solution) when the quinine reduces the blood pressure too much. Doctor Cohen points out

that the greatest danger lies at the point where falling blood pressure and increasing pulse rapidity meet. He has had good results from bacterins in the treatment of pneumonia and continues to use them.

A number of contributors to the same number of *The World* recommend the use of creosote carbonate or of guaiacol carbonate, the latter being used in 5- to 7 1/2-grain doses repeated every four hours.

R. J. Smith advises the use of the circulatory sedatives aconitine, veratrine, and gelseminine, which he associates with digitalin and strychnine in small doses when the latter are indicated. For bronchopneumonia, he praises apomorphine and emetine. Apomorphine, he says, will save more of these pneumonia patients than any other remedy. It liquefies the secretions of the bronchioles and renders expectoration more easy. Strychnine or brucine should be given in association with it, to support the nerve-centers. When the sputum is tenacious and the cough dry and harsh, he gives ammonium chloride and emetine. When there is beginning cyanosis, as shown by dark-finger-nails, 1-drop doses of tincture of phosphorus are employed; for respiratory failure, atropine sulphate; for extreme restlessness and delirium, hyoscine-morphine-cactoid, and to support the heart, digitalin, sparteine sulphate, and cactoid.

## SALICYLATE DIAPHORESIS IN PUERPERAL ECLAMPSIA

Dr. Volland relates, in the *Therapeutische Monatshefte* for May, 1912, an interesting experience which lies many years back and for which he found the explanation only recently. A primipara toward the end of her pregnancy was taken with severe convulsions. On the theory prevailing at that time that eclampsia might depend upon uremia, the author believed that he might remove the excess of urea by energetic diaphoresis. He administered 75 grains of sodium salicylate per rectum, which produced profuse perspiration, and this actually caused the convulsions to subside. Gradually labor-pains set in and the pregnancy was terminated. There fol-



lowed four days of salicylic intoxication, as evidenced by maniacal excitement.

Since it has been shown quite recently that in all cases of severe puerperal eclampsia in which the operation of trephining was done a strong intracranial pressure had existed, produced by a severe cerebral edema, Dr. Volland believes that in his case the marked perspiration which he induced by the large dose of sodium salicylate relieved the edema of the brain and, with it, the intracranial pressure, thereby relieving or removing the eclampsia. He advises employment of sodium salicylate in cases of eclampsia, instead of administering narcotics, or at least before deciding upon premature delivery.

#### TICK-BORNE DISEASE RESEMBLING TYPHUS

John L. Tood says, in *The Canadian Medical Association Journal* for August, 1912, that a tick-borne disease sometimes occurs among persons living in some parts of Montana. The disease is a very fatal one and its symptoms resemble those of typhus. The same tick also is found in some parts of British Columbia, and Dr. Tood heard from several physicians who gave a history in all of the cases which was practically identical: paralysis or paresis, which came on suddenly, being seen in the affected child. A tick would be found attached to some part of the body, but in most instances near the nape of the neck. In some cases the symptoms ended in death; in others, after the tick was removed and with good nursing, complete recovery followed in a few days.

#### CHRONIC ULCER OF THE LEG

As illustrating the difficulty of curing cases of chronic ulcer of the leg, A. Winkelreid Williams (*Brit. Med. Jour.*, Oct. 18, 1913, p. 1013) gives a long list of different methods of treatment collated from the literature upon this subject. Following is a description of his own method, which he has found generally successful.

Whether these cases are of syphilitic origin or not, he finds that at least 90 percent are decidedly benefited by the use of mercury and the iodides, which he gives together. He finds small doses of magnesium sulphate, several times daily, of marked value in cases where constipation and ulcer coincide. To relieve the pain, he applies anæsthesin in solution (20 grains in 1 ounce of alcohol), painting it on the ulcer and allowing it to dry. A sin-

gle application gives relief from pain for forty-eight hours or longer.

The most generally useful application for every description of chronic leg-ulcer is an iodide of starch paste, the formula for which is as follows:

Starch.....	10 1-2 parts
Glycerin.....	20 parts
Water.....	60 parts
Boil, and when nearly cold add	
Liquor of iodine, B. P.....	5 parts

This paste is spread very thickly over the ulcer and made to overlap, and then the bandage is applied. If there is much discharge, this dressing should be renewed twice daily; later, once daily, or even less frequently. Nearly all cases do well under this treatment, but it is not always adapted, as in patients who have an idiosyncrasy against iodine, when the ulcer is intensely inflamed, in cases of neurotic women with irritable ulcers or when there is a very profuse discharge.

#### REMOVAL OF SCARS

The following original method of dealing with scars by multiple incision and the use of thiosinamin is recommended by A. H. Tubby in *The British Medical Journal* (Nov. 1, 1913, p. 1138). This method is employed for scar-tissue on the hands, neck, fingers, and elsewhere where muscular contractions may cause more or less distortion.

With a fine tenotomy-knife, multiple incisions not more than 1-10 inch apart are made in the scar-tissue. However, care is taken that the cuts penetrate, not only into the subcutaneous fat, but that they extend into the surrounding healthy skin. No attempt is made to arrest the hemorrhage except by pressure. When bleeding has ceased, a solution of thiosinamin is rubbed in vigorously, and if the scar-tissue is very thick a few drops are injected into the most prominent bands. Tubby injects as high as 15 minims at a time in the case of children and 20 minims in adults.

After the operation, the part is put in a splint, as much extended as possible, and healing is allowed to go on. There is no excessive reaction and very little pain. After ten to fourteen days, the wound will be healed, while the mobility of the part is increased by at least fifty percent. If necessary, the procedure may be repeated two or even three times if thought desirable. The result is most satisfactory, scars which have been tough, resistant and wire-like having become

soft and supple and the part restored to a condition of usefulness.

In *The British Medical Journal* for November 8 (p. 1203), Tubby describes his method of treating Dupuytren's contraction with fibrolysin. Before applying the remedy in these cases, skin flaps over the area involved are dissected out and turned back, then the affected fascia are dissected away. Hemorrhage is controlled by applications of hot water, after which the fibrolysin is poured into the wound and rubbed in for two minutes, and, where fibrosis is extensive, 5 or 6 drops of the solution are injected into the margin of the cicatricial area.

#### HOW MALARIA CAN BE ERADICATED FROM THE UNITED STATES

That it not only is possible but even comparatively easy to eradicate malaria from our southern states, provided we can get reasonable cooperation from our people, is the contention of C. C. Bass, who writes upon this subject in the October, 1913, number of *The Interstate Medical Journal* (p. 921). The possibility of doing this rests upon the fact that the plasmodium malariae, will not develop within the mosquito when the latter is exposed for any considerable time to a temperature below 65°F. If such temperature conditions prevail, the plasmodia fail to reproduce and those that have developed die. The length of time during which mosquitoes may serve as hosts for malarial plasmodia does not exceed four to six months, except in the extreme southern part of the United States. During the other six to eight months the parasites are kept alive in human hosts, who serve as malaria carriers.

If, then, we can destroy the plasmodia that persist in the human patient during the winter months, we can prevent the mosquito from becoming infected and thus transmitting the disease during the summer months. Quinine, properly given, kills the malarial plasmodia in the blood of humans. In a sentence, all that is required for the complete eradication of malaria is, for everybody who has suffered from malaria during the warm season to take the proper amount of quinine on each of two successive days and in each of six consecutive weeks during the cool season following.

This constitutes a surprisingly simple method and one which undoubtedly would prove effective. Its complete success, however, will depend upon the cooperation possible to be secured from the people. If any

considerable number of infected human hosts remain, they would transmit the disease to mosquitoes, and these in turn would soon re-infect the population.

The remedy, therefore, lies in education, and Doctor Bass is of the opinion that a very large percentage of the people could be reached through the public schools. He asks that systematic instruction be given children upon malaria and its prevention, beginning with the fourth or fifth grade. Older people can be reached through the press of the county, while a great deal can also be accomplished if we can secure the cooperation of large employers of labor, corporations, such as railroad companies, plantation managers, manufacturers, and so on.

Of course, a few infected persons still would not be reached; yet, if the remainder were taught hygienic living, the importance of avoidance of mosquito bites, and the fact that screens on houses will keep mosquitoes from people at night, when they alone can do harm, it would not be long before the disease would virtually be extinct.

#### BOLDINE IN HEPATIC TROUBLES

In *La Dosimetrie* for August, 1913 (p. 120), Monin declares that boldine is a powerful modifier of pathologic states of the liver, rendering more permeable the routes of excretion and secretion, and in general acting as a stimulant to, and aid in, decongestion of the biliary apparatus, being equally valuable as a tonic in atony and flatulence and a reliable anticephalalgic and sedative. Boldine wakes the activity of the hepatic tissues in their entirety, increases elimination of urea and of uric acid, and liquefies the bile; and, further, while diminishing the percentage of solid materials, it facilitates the breaking down and expulsion of hepatic calculi, the formation of which it retards.

According to Fideli, boldine also prevents ascending infections through the bile-ducts and blood-vessels, thus preventing disease of the bile-passages. It is also an efficient remedy in mucomembranous colitis where the false membrane occurs because of insufficient biliary function.

Finally, its calmative and anesthetic power relieves the spasm of the biliary passages, while correcting the torpidity of the hepatic cells—a double action possessed by no other antispasmodic in our therapeutic arsenal.

Monin also speaks of the unquestioned value of the biliary salts as stimulants of the hepatic function. These increase intestinal

peristalsis, dissolve excess of mucus, render aseptic the visceral contents, and favor the emulsification and absorption of fat. These purified bile-salts may properly be associated with boldine.

#### THE MICROCOCCUS DEFORMANS: DOES IT CAUSE RHEUMATOID ARTHRITIS?

Some months ago we published in these columns an abstract of an article by H. Warren Crowe, who announced the discovery of an organism which he called the staphyloid coccus A, and which he believed an etiologic factor in rheumatoid arthritis. In *The Lancet* of November 22, 1913 (p. 1460) he gives a detailed study of this organism which he has now rechristened the micrococcus deformans.

This new organism, Doctor Crowe tells us, belongs to the micrococcus epidermidis group. Careful agglutination tests and opsonic data are given by him, and considerable clinical experience is reported in support of its causative connection with arthritis deformans. Thus, for instance, it has been found in the blood of a patient who developed acute arthritis, in the urine of two women suffering from rheumatoid arthritis, in the nasal discharge of another such patient, as well as in the intestinal canal, also from other portions of the body of patients suffering from this disease.

In 26 cases of typical rheumatoid arthritis, the organism was found present in all. It was cultured in 22, and positive complement-fixation was demonstrated in the remaining 4 cases. Further in 14 less severe and doubtful cases of the disease, the organism occurred in 11, being cultured from 9. If neuritis is included—and Doctor Crowe believes this should be done—the total number of cases is 48 and the incidence 45; that is to say, the organism was found in nearly 94 percent of all the persons affected.

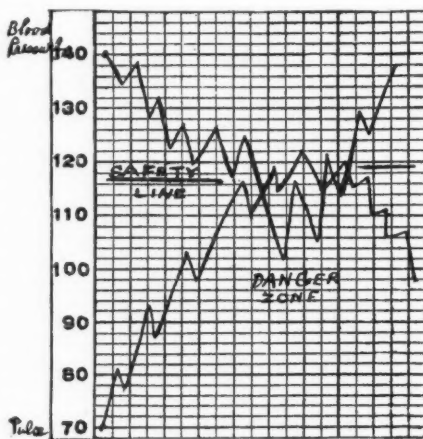
Doctor Crowe does not claim that this coccus is the only organism concerned in the etiology of this disease. Streptococci, colon bacilli, and other organisms have been found in the local foci of infection; indeed, he has encountered them himself and is convinced of their pathogenicity. His claim is, that these other microbes constitute a mixed secondary infection, the primary cause, though, being the micrococcus deformans.

The practical value of Doctor Crowe's observation depends upon the possibility of producing from this organism specific bacterins that will prove curative, alone or com-

bined with bacterins made from streptococci, bacillus coli, and other germs. Such a bacterin he has already prepared, and employed it with considerable success in some instances.

#### WHAT IS THE GIBSON RATIO?

The Gibson ratio, says Solomon Solis-Cohen, quoted in *The Medical World* for December, 1913 (p. 494), is named after the late Doctor Gibson, of Edinburgh, Scotland, and represents the relation between a decreasing blood pressure and increasing pulse rate occurring in the progress of a case of pneumonia. When, represented graphically, there is a space on the chart tracing between blood pressure and pulse frequency, there is



Showing safety line where blood pressure curve is above pulse curve, and danger zone where these curves cross.

comparative safety; when, however, the two lines cross, that is, if the pulse rate is higher than the blood pressure as expressed in terms of millimeters, then danger threatens. The accompanying chart illustrates this better than we can tell it.

#### CHRONIC INTESTINAL STASIS

Sir W. Arbuthnot Lane, the distinguished English physician who recently visited America, is an earnest believer in the pathogenic influence of gastrointestinal autointoxication upon the body and its functions. In a paper recently published in *The British Medical Journal* (Nov. 1, 1913, p. 1125), he outlines some of the symptoms that may result

directly from such forms of toxemia, as follows:

(1.) The loss of fat. (2) Wasting of the voluntary and involuntary muscles. (3) Degenerative changes in the skin, including alteration in texture and pigmentation, sometimes so deep that the patient appears to be suffering from Addison's disease. (4) Subnormal temperature, especially of the extremities, the bloodless condition of the latter sometimes being so extreme as to simulate Raynaud's disease. (5) A condition of apathy, stupidity or general mental misery, which may become exaggerated into a state of melancholia or even apparent imbecility; these patients sleep badly, suffer from neuralgic symptoms and neuritis, headache, and convulsive disturbances, and may even commit suicide. (6) Patients complain of rheumatic aches and pains in the muscles and joints, often in the skin. (7) Thyroid gland wasting, so much so that in marked cases no evidence of its presence can be detected by the finger. (8) The blood pressure may be raised or depressed. (9) The mammae show very definite degenerative changes, especially in the upper and outer zone, and cancer readily develops. (10) There is a tendency to prolapsus of the various abdominal organs, illustrated by falling kidney and prolapsus of the uterus. (11) The patient becomes breathless upon exertion, this symptom often simulating asthma. (12) Degenerative changes in the heart-muscle may be the result of antiointoxication, also atheromatous degeneration of the blood-vessels. (13) The kidneys are liable to become affected by the abnormal strain, changes resulting that are readily grouped under the term "Bright's disease." (14) The hair of the head loses its color early in life and tends to fall out. (15) Chronic disease of the pancreas may ensue, also pancreatic diabetes. (16) The ducts of the liver and gall-bladder may be infected, and the various diseases of this organ and its appendages may follow. (17) Degenerative diseases of the eye frequently are produced by autointoxication.

As to the method of treating autointoxication and the diseases which it causes, Lane depends principally upon surgical measures, although he is an advocate of the use of liquid petrolatum as a laxative in the early stages and in the milder cases; the oil preceding the food in its passage along the canal and facilitating fecal passage. He also advocates the use of a spring support, which presses on the abdomen below the umbilicus and stimulates the intestines to muscular

activity. But the treatment which he advocates most warmly is surgical, this consisting in division of constricting mesenteric bands, gastroenterostomy, iliocecostomy, and even removal of a portion of the colon—colectomy.

#### TWO NEW ARSENICAL COMPOUNDS FOR SYPHILIS, GALYL AND LUDYL

Drs. Beurmann, Mouneyrat, and Tanon, in a paper read before the Medical Society of Hospitals of Paris, discussed two new arsenical derivatives which they claim to possess several advantages over the arsenobenzol derivatives as antisypilitic remedies. These remedies are not vasodilators, they do not coagulate albumin, have a minimum of neurotropic action, are readily soluble in sterile water, and are sterilized at a temperature of 120 degrees. Furthermore, they have a marked parasitotropic action, not only for the spirochetæ of syphilis, but for other spirillæ as well as trypanosomes.

These two synthetics, discovered by M. Mouneyrat, are, galy, or 1116 (tetraoxydiphosphaminodiarsenobenzin), and ludyl, or 1151 (phenyldisulphaminotetraoxydiaminodiarsenobenzin). They are in the form of a yellow or yellowish-gray powder, readily soluble in sterile water. Their toxicity has been investigated for various species of animals. In the monkey, particularly, the maximum toleration of galy and of ludyl is from 0.08 to 0.10 Gram, intramuscularly, and from 0.05 to 0.07 Gram, given intravenously, per kilogram of body-weight.

Experiments with animals have shown that these substances possess a very marked parasitocidal action. Under their influence, the trypanosoma gambiense, the spirillæ of Dutton (the microorganisms of African recurrent fever), disappear rapidly, and do not reappear. In man, the clinical experiments in more than 220 patients have demonstrated an equally powerful influence in syphilis.

As with arsenobenzol, there are two methods of administration, the intramuscular and the intravenous. Intramuscular injections are made in oily suspension, 1 Cc. of emulsion containing 0.30 Gram of the remedial substance.

The injections, dosed at 0.5 Cc. each, are made into the muscles in the lumbar regions, on each side of the body, and repeated every eight days. Intravenous injections are made either by the customary method, or else with new autoinjectable ampules, which allow of

a solution of the substance in distilled water, under aseptic conditions, at any desired moment.

#### TREATMENT OF CHRONIC BACILLARY DYSENTERY

Leonard Rogers, whose studies of amebic dysentery have led to the general adoption of emetine as a specific for that form of the disease, presents, in *The British Medical Journal* (Nov. 8, 1913, p. 1198), a new and apparently successful method of handling the chronic bacillary type.

This form of dysentery, Rogers says, has a very high mortality, the percentage of deaths in one large Calcutta hospital, where several hundred cases are treated yearly, reaching 40 percent. He has tried the stock vaccines, but has been disappointed. Occasionally he has obtained good results with an autogenous dysentery vaccine, but just as frequently this has failed also.

The lesions in dysentery of the chronic bacillary form are practically limited to the lower portion of the large intestine. In these chronic cases, there are extensive depressed and often serpiginous ulcers, located on a thickened bowel-wall.

Considering the location, general internal treatment with the laxative salines and other classical remedies does not seem indicated, since the drugs given by the mouth must traverse the whole length of the gastrointestinal canal before reaching the seat of the disease. The best results are obtained with the silver salts. Silver nitrate is a useful remedy, but has two serious disadvantages: first, it is precipitated both by chlorides and albuminous substances; and, second, when used in sufficient strength, it is likely to cause severe pain.

Rogers has recently been using in these cases the organic silver compounds, the best results having been obtained from silver gelatose (albargin). This gave the best results in broth-culture, killing the Shiga bacillus in five minutes in dilutions of 1 : 500 and of 1 : 1000, respectively, in two trials. Nargol was next in efficiency, while protargol and mercuriol also were considered of value. A number of other remedies were tested, among them iodine, which, dissolved with the aid of potassium iodide, was quite effective.

However, albargin was the remedy of choice. This was given in enemas containing 16 grains in 1 pint (that is, 1 grain to the ounce, or approximately 1 : 500). This quan-

tity is usually increased to 1 1-2 pints of this solution. These enemata are given once daily, and should be retained for from fifteen to thirty minutes. In practically all the cases reported, improvement was immediate, and in most cases was permanent.

#### PRESERVING RUBBER GOODS

In our January issue (page 66) various methods of preserving rubber goods were enumerated. This being a question of a certain practical interest to many (for it is annoying—sometimes serious—to find rarely used apparatus worthless when needed; such as catheters, stomach-tubes, bulbs), we will add a few more suggestions that have come to mind; namely: Immerse the soft-rubber article (1) in a 1-percent solution of formaldehyde (formalin 1, in water, 100), or (2) in a 1-percent zinc-chloride solution, or (3) in a saturated solution of boric acid (1 : 32).

#### WATER-GLASS FOR PRESERVING EGGS

Logically there should be no room in a publication like this to touch upon preserving eggs; however, at a period in history when the lucky possessor of a dozen of this "hen-fruit" is classed with the Cresuses, while, moreover, the family doctor also makes himself popular in proportion as he becomes useful as the family adviser in matters of supreme importance, a hint in this direction may not come amiss at this juncture in rural communities.

The best method, at present known, of preserving eggs for a number of months is, to immerse them in a 10-percent solution of sodium silicate—that is, the so-called soluble glass or water-glass. But, the water-glass of commerce is a crude product of very crude processes and, hence, varies greatly in composition. To what unexpected extent, has lately been ascertained by two German food-experts. These chemists have found the preparations sold as solution of sodium silicate to range widely in their content of silicic acid relative to the sodium.

This fact has an important bearing upon the question of preserving eggs. For, free alkali causes the white of the egg to turn yellow (even brownish), and to become opaque, gelatinous, and even solid; while the yolk also becomes hard and turns greenish. These changes occur similarly when the water-glass is abnormally alkaline. Thus, one sample changing the immersed eggs in



this manner was found to contain but 1.4 percent of silicic acid, to 24 percent of sodium oxide; while the proportions in another sample, that proved satisfactory, were 36 percent of silicic acid and only 10 percent of sodium oxide.

It is plain that anyone undertaking to put away eggs in water-glass solution (and this must be before they are a week old) should get it under the guarantee of a reliable dealer, who himself should test it or hold a similar guarantee. This may prevent great losses, perhaps.

#### ETHYL-HYDRO-CUPREIN: A NEW "SPECIFIC" FOR PNEUMONIA

Carnot, in his excellent therapeutic review in the November 1 number of the *Paris Medical* (p. 484), says that among the most interesting achievements of the year in chemotherapy are the careful studies made by Morgentroh (see *Therapeutische Monatshefte*, 1913) on a derivative of quinine, ethyl-hydro-cuprein. This body was shown by the investigators to possess a specific action upon the pneumococcus of mice, and they have succeeded in curing 90 to 100 percent of these little animals experimentally infected with this organism, the dose employed being 0.7 Gram for a 20-Gram mouse.

Unfortunately, this drug, when employed by Fraenkel in the treatment of humans, has not proven very successful. He treated 21 cases, and of these one-half were not benefitted; in 25 percent the action was doubtful but in the rest there was a marked favorable action. Furthermore, there were disagreeable complications, especially passing amblyopia in 14 percent of the cases. However, Wright, who injected the remedy under the skin in 1- to 2-Gram doses, never observed any amblyopia.

It may also be noted that hydro-cuprein possesses some valuable anesthetic properties. These facts, while interesting and suggestive, do not encourage the general use of the drug in human practice. We shall still use the defervescent alkaloids.

#### REINFORCEMENT OF TUBERCULIN WITH IODOFORM-THERAPY

In an address delivered before the Bacteriologic Congress held in March at Berlin, Dr. Rothschild, of Soden, maintained (*Muench. Med. Woch.*, 1913, No. 16) that serotherapy alone never can effect a cure in

tuberculosis, inasmuch as these agents merely neutralize the specific toxins; but that bacilli can be destroyed only by chemical means. With this idea in mind, Dr. Rothschild proposes that serotherapy be supplemented by chemotherapy; and he suggests iodoform—which already has given such excellent account of itself in surgical tuberculosis—be given a thorough trial in conjunction with tuberculin.

We hardly need remind readers of CLINICAL MEDICINE of the advantages of iodine-therapy in tuberculosis, for many have used calxiodata in this disease with excellent results.

#### THE TREATMENT OF WEAK FEET

The proper treatment of weak feet, which, if neglected, become flat feet, says Charles Ogilvy (*N. Y. Med. Jour.*, Sept. 6, 1913, p. 449), by no means consists in the insertion of plates or foot-supports such as patients usually are advised to procure at some shoe-store. Such arch-supports do more harm than good.

A proper plate is one which supports the foot from the front to the back and also laterally when the foot is performing its function of weight bearing, and this can be made only from a plaster model. Furthermore, the employment of any arch-support is detrimental unless the eversion first is corrected. This can be accomplished by elevating the inner side of the heel of the shoe and extending the heel forward on the sole some three-fourths of an inch. This should be done in every case. In milder cases, this will be sufficient, providing the shoe is built on proper lines.

Foot exercises help to strengthen the muscles, thereby enabling the patient to retain the corrective position. However, in many cases the patients return after a time, with the statement that the correction of the foot can not be maintained when the plate and shoe are removed.

In such cases of this latter kind, Doctor Ogilvy advises an operation for the fixation of the astragaloscaphoid joint. A curved incision is made immediately over this articulation down to the astragaloscaphoid ligament, and through this ligament to the joint. The articulating surfaces of the two joints are removed and the wound is closed with catgut sutures. Gauze dressings are applied and the forefoot drawn inward and downward in marked inversion. A plaster-paris bandage is applied, to hold the surfaces

in position. It is allowed to remain on for about five weeks.

#### TREATMENT OF GONORRHEAL RHEUMATISM AND ORCHITIS WITH SENSITIZED VACCINES

At a meeting of the Medical Society of the Hospitals, reported in the *Gazette des Hôpitaux* (Oct. 28, 1913, p. 1939), Dopter and Pauron report the case of a patient who, after an acute gonorrhea, was attacked by rheumatism of the right knee. Prior to this time no treatment had succeeded in relieving the pain or swelling. When the patient entered the Val-de-Grâce Hospital, the right knee was greatly swollen and the lower limb in a condition of semiflexion, walking, and the standing position being practically impossible.

The subcutaneous injection of gonococcus vaccine brought about a considerable local reaction, by the next day, however, the pain and swelling had nearly disappeared. A second injection produced complete disappearance of the articular phenomena and the patient returned to his normal condition and was able again to walk. This truly surprising result was obtained within five days.

The authors cite several other cases no less convincing in which this treatment has brought to a happy termination old and chronic cases in which the entire therapeutic arsenal had been employed without decided modification of the disease. In chronic cases, however, the cure is much more slow and usually requires numerous injections, but the improvement obtained after the usual methods of treatment have failed is most striking. Furthermore, the authors declare that patients suffering from severe gonorrheal orchitis, with the intense pain which accompanies it, have benefited greatly by this method of treatment. Within twenty-four hours after the first injection, the pain disappears and the tumefaction is reduced, and at the end of two to four days the swelling is reduced to a simple epididymal kernel, which thereafter slowly disappears.

#### THE DIAGNOSIS OF GASTRIC ULCER

The history and symptoms of gastric ulcer are typical in but few cases, remarks J. R. Verbrycke in *The American Journal of Medical Sciences* (Nov., 1913, p. 742). There is no characteristic sort of pain, although in the different individuals the pain usually does appear at a fixed time after meals, and

always at the same time in the same patient. This pain is relieved by food, alkalis or vomiting. The vomiting of blood, one of the old cardinal symptoms, does not appear in ten percent of the patients; and even nausea and vomiting, while many times present, are absent in fully one-half of ulcer-patients.

Two points are of decided value in the consideration of the history: (1) There is a certain periodicity, that is, after prolonged ill health all the symptoms may be completely relieved for days, weeks or months; (2) when the pain is most severe, all other symptoms from which the patient suffers are likely to be increased. Upon physical examination, a tender point will usually be found at some spot in the epigastrium or at the dorsal vertebræ behind, or in both places. However, this tenderness is often slight, and it may be absent. When present, it always occurs in the same spot.

Of the laboratory tests, Verbrycke attaches more importance to the determination of occult blood than to anything else. Since the bleeding is intermittent, several examinations should be made under varying conditions.

The benzidin reaction is the best of which the writer has knowledge, but blood from hemorrhoids, from the gums and elsewhere along the alimentary canal should be excluded. Also of value is the thread-impregnation test of Einhorn. Hyperacidity is found in a large proportion of the cases, but may be absent. The x-ray examination is of undoubted value.

To summarize, Doctor Verbrycke submits that there are several points which practically assure a diagnosis; namely: tender point, with occult blood; hypersecretion, with tender point; hypersecretion, with occult blood; tender point, with repeated positive thread tests; tender point, with hematemesis; hematemesis, with hypersecretion; hypersecretion, with positive thread tests.

#### VITILIGO AND SYPHILIS

Drs. Pierre Marie and Crouzon presented to the Société des Hôpitaux, at its séance of July 5, 1912, a patient who had been affected for the last two years with vitiligo and cutaneous syphilis of the secondary-tertiary stage. This observation goes to confirm the hypothesis that certain vitiligos are of a syphilitic nature. As early as ten years ago, these authors formulated this hypothesis, but it has not become classic, although a number of authors have corroborated this opinion.—*Paris Médical*, 1912, p. 178.

# Miscellaneous Articles

## Careless Examinations, or Snapshot Diagnoses

THERE have appeared in print, from time to time, articles by various eminent men asserting that the so-called "snapshot" diagnoses leads many a man into an infinite amount of trouble. Many a case of "rheumatism" has no connection whatever with rheumatism. Thus, for instance, the most striking illustration of neglect or carelessness in diagnosis I have ever seen was in the case of my own father, whose trouble was diagnosed as sciatica by three physicians, who ascribed the pains in the thighs and legs to that form of rheumatism. In reality he had a malignant tumor located in the epigastrium, and this growth was so large that he could palpate it himself. He was taken to a Chicago surgeon, and in five minutes a correct diagnosis and an absolutely correct prognosis was given. He died just one month later. Although I was but fifteen years of age at the time, this error impressed me deeply, and I could not quite forgive the men who had tortured him with the x-ray, static electricity, massage, and other methods that were absolutely contraindicated in a case such as his.

During my practice I have encountered a number of mistaken diagnoses, some not so grave as others, but most of them owing to snapshot judgment rather than to deficiency in schooling or medical education. However, we are none of us infallible; but I believe the following case will interest some of you.

The patient, a woman 43 years of age, came to my office complaining of pain in her right arm and shoulder. The arm was not in normal position, but was held away from the body at about a 45-degree angle and could not be raised except from the elbow. The shoulder-joint was practically immovable except when the scapula and all moved with it. She said she could not do her housework, comb her hair or button her clothes in the back. She could not put her hand to her face without bending her neck to meet the hand.

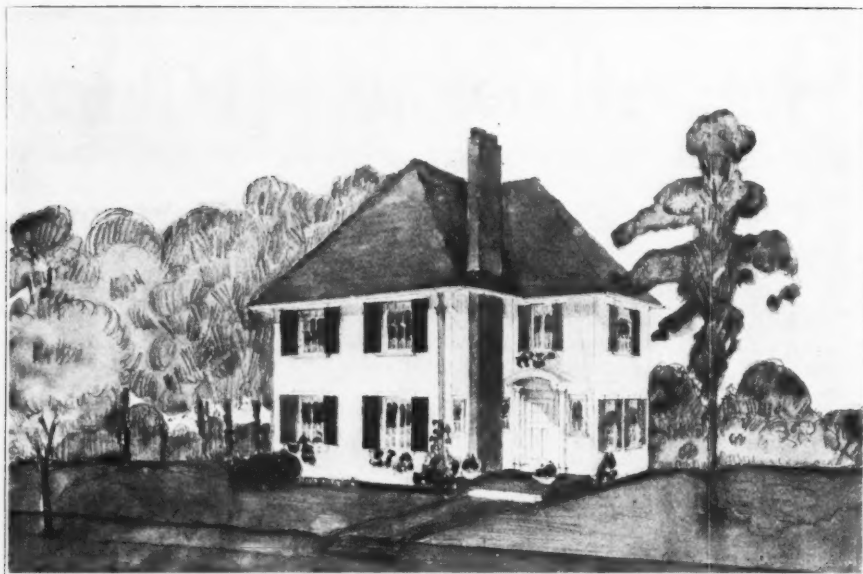
Her husband said she had treated for rheumatism for the last eight months, but there

had been no change. Then, one month ago, she was anesthetized by a physician, who attempted to reduce the dislocation but failed. Then he called in an Osteopath. Together they pulled and twisted the arm, using traction, with the knee in the axilla. This attempt was unsuccessful, and when he wanted to anesthetize the patient again, a month later, and repeat the operation, they refused. Then he suggested the use of the x-ray; but they refused, thinking that he had no idea of what the condition really was.

Upon inquiry, the woman then informed me that eight months ago, while gathering eggs on the farm, she was standing on a box about 2 feet high and had her right arm in the hen's nest, when the box she was standing on slipped out from under her feet and she was held by the edge of the next box, which caught her in the axilla. She was unable to do her work or raise her arm for months and it was exceedingly sore and painful. She was not aware of the extent of the injury at the time, thinking she had just wrenched the arm, when, in fact, it had been forced up and out of its socket.

Later she consulted the physician in question, and he made a diagnosis of rheumatism, as before mentioned. During all this time she was complaining of various severe pains in the arm and region of the shoulder, and especially about the shoulder-joint.

I found the humerus dislocated upward and a marked ankylosis in the new shoulder-joint. The head of the humerus was plainly visible and palpable above the clavicle. The arm was 1 1-2 inches shorter than left arm, immobile so far as lifting up from the side was concerned. The muscles in the anterior axillary region were tense and hard. She was unable to raise her hand to the face and unable to lift the arm straight up from the side. Plainly, the trouble was a traumatic upward dislocation of the shoulder, caused by the force transmitted to the axilla, pushing the humerus upward out of the glenoid cavity.



A Combined Physician's Residence and Office, Especially Drawn for Readers of Clinical Medicine

In instituting treatment, I gave her a full tablet of hyoscine, morphine and cactoid half an hour previous to administering ether for anesthesia. Then I reduced the dislocation by Kocher's method; manipulated the arm in various normal positions while she was under the anesthetic, and then bound the arm to the chest and to the opposite shoulder with adhesive straps, and over this a bandage which included the arm and the right side of the thorax, to insure immobility of the arm and the shoulder-joint. I left it this way for five days, then removed the adhesive straps. Then I instituted passive movements and massage, and these were repeated from day to day, the patient coming to my office every day for the passive massage, while doing as much with the arm as possible at home. During the reduction of the shoulder care was taken to break up the adhesions.

Condition improved gradually under the passive treatments, and in about four weeks there was complete mobility for passive movements, and nearly so for the active, until now she has complete use of the arm. The soreness has entirely disappeared and she can use the right arm as well as the left one. The arm can be put in all the normal positions without difficulty or pain to the patient, and the deformity has entirely disappeared, as well as has all the pain and stiffness.

The medicinal treatment was as follows: Sodium salicylate, grs. 5, three times daily; and, externally, linimentum chloroformi, to be used when massaging the shoulder and arm at home.

As the literature at hand says very little about this sort of lesion, except that it is quite rare, I thought possibly it might interest some of the readers, as well as illustrate the necessity of a thorough physical examination as a routine procedure.

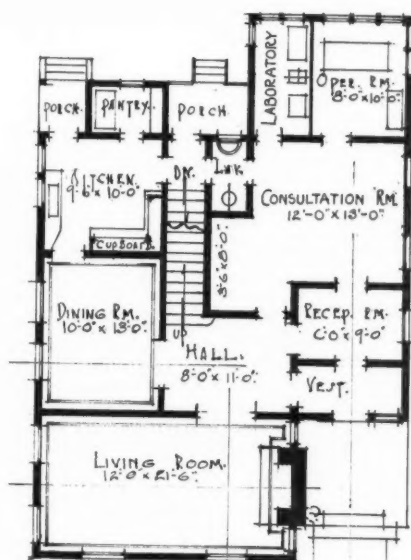
F. J. PORT.

Milbank, S. D.

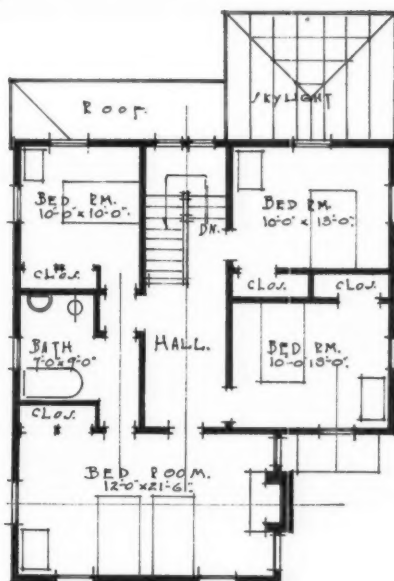
#### A COUNTRY OR SUBURBAN HOME FOR A PHYSICIAN

On this and the following page we show the floor plans and front elevation of a house for a physician practicing in a city suburb or in the country. This plan was drawn especially for CLINICAL MEDICINE by Mr. Arthur H. Busch, 1306 Gregory Avenue, Wilmette, Illinois. A few words of explanation may add to its interest.

In the first place, the house, as here designed, is capable of being enlarged or reduced somewhat, according to the taste and purse of the builder. For instance, some physicians will find a reception-room and a consultation-room sufficient for their needs. If such be the



First Floor



Second Floor

Floor-Plans for Combined Physician's Residence and Office. Arthur H. Busch, Architect

case, the operating-room and the laboratory may be omitted, although these will be found most convenient and desirable. If possible, the house should be so arranged that these two rooms may face to the north, so as to get the best lighting without the direct rays of the sun. It will be observed that a skylight will permit of influx of light from the top, in addition to that coming from the sides. In order to flood these rooms and also the consultation room with an abundance of light, Mr. Busch suggests that the partitions between these three rooms be made partly of ground glass.

The consultation room is made very large, so that it may accommodate the doctor's library as well as any larger apparatus, such as a hot-air apparatus, a static machine or anything of that kind. However, the books may be housed in the recess next to the stairway. If it is desired, a door may open to the outside for an exit, although the arrangement shown will probably be most satisfactory to the majority. The laboratory room is ideally lighted—just the place to work with a microscope, or do the ordinary routine of testing secretions and putting up prescriptions. The operating room is just the place for making dressings, performing minor operations or, in case of emergency, a major operation as well. I should be fitted up with

white enamel furniture, a sterilizer, instrument-cases and an operating-table. Also a sink can be placed in the operating-room opposite that in the laboratory room, the plumbing being conveniently arranged for this purpose.

The arrangement of the living-quarters requires no special description. We are sure that it will appeal to the doctor's wife, who will be most interested in this part of the plan. The living-room is large, with a big open fireplace, and the bedrooms are exceptionally large. The one to the front of the house, which is  $12 \times 21\frac{1}{2}$  feet, is ideal. If it is desired, this room can be converted into a library or study.

Some of our readers will want a covered porch. Mr. Busch believes that, if a porch is desired—which usually will be the case in the country—it may best be added on the side of the house, adjoining the dining-room. This is an ideal location for an enclosed porch, and it would be especially attractive for outdoor meals during the summer time. If a sleeping-porch is wished, it would be very easy to put one at the back of the house, over the operating-room.

This plan is simple, dignified, and beautiful; it is capable of numerous changes and elaborations, and, we believe, will fulfill the needs of hundreds of physicians who are



planning to build. It will cost in the neighborhood of \$5000—more in some communities, less in others. It all depends upon material and labor costs and the quality of finish.

Any doctor interested in this subject who wants a home of his own, whether like this one or not, should write directly to Mr. Busch, who will be very happy to answer all inquirers and will give any advice or assistance within his power in making plans and elaborating ideas.

When you build, build a house suited to your special needs; and, if this plan doesn't "fit," then arrange for something that will. It is cheapest in the long run to consult an architect.

Next month Mr. Busch will submit a plan for a physician's combined city residence and office.

#### HOW I MANAGE AN OBSTETRIC CASE

Many people underestimate the importance of an obstetric case. "Ketchin' a kid" is no light or trivial thing, and when a woman goes down into the dark valley to bring forth a child she is entitled to the *very best* treatment and consideration possible to give her.

We have our works on obstetrics and also many treatises and articles on forceps and other abnormal deliveries, and they are all valuable; however, the fact is, that the great majority of cases are normal and the women would get through all right without any "medical assistance." Then, if that be true, what's the use of a doctor, anyhow? I have been in consultation with doctors (I dislike to "knock") where this question had point, indeed; but, as for myself, I can freely say with a good conscience that I have never conducted a case where I did not honestly earn the fee, and many times much more.

The first thing necessary to good (I do not say "successful," for that is a questionable standard) obstetrical work is the mental attitude of the accoucheur. Whatever the circumstances—"sent for" or unwelcome, sick or poor, bastard or legitimate, first or thirteenth—the little being headed, or breeched, toward the world is a potential man or woman, with all the rights to life and all that that means. And the mother—however she might have "got it"—she is at a crisis, and has the right to my very best service. When I attend a case I am *on the job* from the time I enter the house until I leave it; there is no time for anything else whatever, except, of course, during those

long tedious first stage, when sometimes I may eat a bit.

The first thing I do is, to make an external examination, if I have time, so as to get the "lay of the land." If there is as yet "no baby," then I get as full an understanding of the course of gestation, previous deliveries, and other facts as is possible. All this with as much sympathy and encouragement as conditions demand. I have heard doctors say that if they could get their obstetrical patients angry they would "work." Such a doctor ought to be obliged to have a baby every six months, if the laws of nature and pregnancy could be changed, and kept up until he got that brutal notion out of his head. I have never seen a nervous, apprehensive mother-to-be whom I could not help by judicious sympathy and encouragement.

Next there comes the cleansing of the vulva, sterilization of hands, and an intravaginal examination. This latter is for my own use only, and all the uninvited neighborly guests get for a while is that "everything seems to be going all right." Then comes a little trick that has worked wonders for me many times, surprising to the initiates. I saturate a piece of cotton in a 5-percent solution of quinine and urea hydrochloride and place it within the vaginal orifice; then, if there is a half-hour of grace, the woman is spared that excruciating end of the second stage so often witnessed.

These things done, I simply watch and keep tab on things, after having got all things ready. If there is a rigid os, I give one granule of caulophylloid every fifteen minutes until the rigidity melts away. If progress is slow and pains are not efficient, I give 15 drops of pituitrin solution hypodermically if she is a multipara; but I am a little slow to give it to a primipara unless the soft parts are relaxed.

During the later period of the second stage I attend to business. I do not fuss, but quietly keep my fingers on the advancing portion of the child and direct the energies as much as possible, slowing it up to prevent a tear. In this way I have but very few lacerations occurring.

In those cases of extreme nervousness and suffering, I use hyoscine-morphine-cactoid or hyoscine-morphine-cactoid modified, as may be indicated. I have used one or the other preparation *many times*, and with *not a single* bad effect from it. On the contrary, I have seen only good results. When pituitrin is given, I expect a short third stage and prompt and effective contraction. Immediately after cutting the cord (I tie twice), I find out about

the condition of the womb. If the contraction is good, I wait, *but watch*.

Having given the directions as to dressing the cord and taking care of the baby, I turn it over to the nurse and attend strictly to the mother. Here is where most accidents occur, and my hair has stood *a la pompadour* a few times; still, by being on the job, I have always checked serious trouble.

I follow that old wornout, fogified, antiquated practice, that, I presume, was used in the 60's when I first raised a wail: I give ergot *after* the placenta is expelled—not before. It may not be necessary, but I believe it is a good thing to do. More depends upon the first hour after delivery than upon a much longer time later.

Being assured that the placenta is "all there" and the womb is empty and contracted, I begin a half, three-quarters or whole hour of careful but not fussy watching. If the baby has cried vigorously and seems all right, I let the nurses have full swing, except that in the case of a boy I see to it that the binder is put on *as loosely as practicable*. I like the truss-makers, but I don't want to prepare a patient for them by a tight bandage on a baby. The removal of the Kelly pad (I use one—it makes friends with those who have to clean up, if nothing else) and the toilet with bichloride solution, placing on the binder, and then a good examination of the baby complete the job.

I am now ready to depart, but count out a few 2-grain phenolphthalein tablets, to be used as needed, and a half dozen hyoscine-morphine-cactoid modified for afterpains. No after-visit is made unless I am called.

B. F. VAUGHAN.

Meno, Okla.

[Obstetrics is changing rapidly, like everything else in medicine, as Dr. Vaughan's interesting article shows. New and valuable remedies and the management of these cases along surgical lines are causing the revolution. And the public is "getting wise." Just as an illustration of the extent of popular enlightenment, I may cite a malpractice suit recently started against a Chicago doctor because he did not use rubber gloves in the management of a confinement case!]

A word of warning about ergot. We recently had occasion to have a number of samples of ergot tested pharmacologically to determine their activity. Only 3 of 26 samples examined were found real good, 2 were of fair quality and the rest were practically worthless. It is apparent that the

doctor needs to be mighty careful in selecting his supplies of this drug.—ED.]

#### TONSILLITIS

This is the time of year when tonsillitis is encountered. To abort it get busy early.

When the patient is first seen, clear out his bowel with calomel, gr. 1-6; bilein, gr. 1-8; and irisoid, gr. 1-6, given every half hour till four to six such doses have been taken. Follow the last dose with a saline laxative to full effect. After the bowels have been cleared, begin with the tonsillitis mixture, composed of aconitine hydrobromide, gr. 1-3000; bryonin, gr. 1-500; atropine sulphate, gr. 1-1500; mercuric iodide, gr. 1-100; and saccharin and aromatics as flavors. Give this at intervals of one-half hour, till there is dryness of the mouth and throat; then lengthen the interval to one or two hours, so as to maintain the effects. Along with this, push calcium sulphide, 1-6 grain every hour or 1-2 grain every two hours, until the patient is absolutely saturated. If the aconitine in the mixture is not sufficient, add more until the desired effect is obtained.

Examine the urine in all cases, and if acidemia is shown push sodoxylin to full effect or until the degree of urinary acidity, as shown by the Harrower acidimeter, is between 20 and 40 degrees.

This, in a nutshell, is my treatment for acute tonsillitis, and if I see the case early a satisfactory result follows in ninety percent. All remedies must be pushed to full effect, and this maintained until recovery. Two cases recently coming under my observation showed improvement within twenty-four hours after the application of the calcium sulphide and the tonsillitis mixture, and complete recovery within three days. Sodoxylin was omitted here, as neither case showed acidemia. Otherwise the treatment outlined above was followed to the letter.

GEORGE L. SERVOS.

Gardnerville, Nev.

#### BRONCHOPNEUMONIA IN CHILDREN

Your frequent importunities for contributions have at last stormed the fort of my reticence—reticence, because who am I that I should presume to add anything to the many good things reported in our most excellent journal?

I will offer a few comments on bronchopneumonia in children. As the Irishman said about a runaway horse, "the best time to

stop him is before he begins to run." So it is with bronchopneumonia. The best time to cure it is in the initial "cold" stage. The trouble very often lies with the parents, who, regarding the trouble as "only a cold," treat the child with home remedies or patent medicines till alarming symptoms supervene; and only then a physician is summoned.

Upon arriving at the bedside, we usually find the little patient with heart at 120 or more per minute and respirations from 30 to 40. (Don't make your diagnosis on these symptoms alone, as I have many times seen the same symptoms in acute intestinal diseases.) The fever is usually 102 degrees or more. Râles abound all over lungs, unless the bronchioles are altogether occluded. Cough is usually quite severe, with expectoration more or less profuse, according to whether the cough is "tight" or "loose." The expectoration is always swallowed by children not old enough to spit it out, and for this reason the bowels need to be well looked after during the course of the disease.

In a great many cases, we find the bowels more or less tympanitic and frequently constipated. The first indication is, to "clean out," "clean up" and "keep clean" in the usual way—you all know how, if you have read *CLINICAL MEDICINE*. After a thorough house cleaning you will find your patient feeling more comfortable and the temperature reduced two or three degrees. In urgent cases, high enemas give excellent results.

In addition to the foregoing, the thorax all over the lung-area should be well rubbed with hot camphorated oil to which oil of mustard has been added—30 minims to 4 ounces. This produces good counterirritation, without danger of blistering.

I do not use any of the clay pastes in these cases—for several reasons. I cannot think it good policy to close up a large area of pores, as is done when such a paste is applied. Then, also, if a patient has 4 ounces of anti-phlogistine applied to his thorax, how much extra labor has he to do in twenty-four hours? This patient is breathing 40 times per minute. Let us see: 4 ozs.  $\times$  40 = 160 ozs. per minute. 160  $\times$  60 = 9600 ozs. per hour. 9600 ozs. (or 600 lbs.)  $\times$  24 = 14,400 pounds. In other words, 7 tons' weight is lifted in one day by the sick little child. Quite a load for even a well man to lift in twenty-four hours!

Further, clay poultices applied to the chest with cloth outside act like an adhesive strapping, thus limiting the motion of the ribs during respiration. This may be desirable

in some cases where the pleura is involved, but the average case requires every iota of expansion that is available.

A very important factor in the management of these cases is the ventilation of the room. The room should be kept at an even temperature of from 65° to 68° F., and a dish of water with a little oil of eucalyptus in it kept on the radiator or register adds humidity and a slightly disinfectant quality to the air. In damp or cold weather, I cannot agree that it is proper to admit the outside air directly to the patient's room. Fresh air I insist upon, but let it be warmed and otherwise modified before admitting it to the sick-room. Bathing the face and extremities in cool or tepid water reduces the temperature and makes the patient feel better.

For the fever, give veratrine if the skin is dry; aconitine, if moist. Give digitalin, brucine or strychnine arsenate for bracing. Calx iodata to hasten resolution; give in good-sized doses, 1-2 to 1 grain or more every two hours in order to get good results.

If an expectorant is required, ipecac or emetine is about the best that can be used. An occasional emetic dose of ipecac does good in small infants who cannot "cough it up," by emptying the bronchi of mucus.

These things, together with proper feeding, I consider the essentials in the management of the average case of bronchopneumonia.

A. F. WRIGHT.

Wayne, N. Y.

#### THE ARMY TEST RIDE

In the December number of *CLINICAL MEDICINE*, we editorially called attention to the great burden which was being put upon the older army officers through the compulsory annual test-ride. We felt, and still believe, that such a test not only was unjust, but also dangerous, and that the lives of many useful men were being shortened and the army thereby deprived of the service of a class of skilled men whom it is impossible to replace.

We therefore were much gratified to learn that, on November 24 last, General Wood, chief of staff, gave directions modifying the severity of these tests. This order reads as follows:

"Field officers who are 60 years of age and over will be exempted from the annual physical test, although these officers will be subjected to the annual physical examination.

"Officers of the permanent staff corps and departments above the rank of captain who are not detailed from the line, who are engaged upon work of a general character and who have reached an age and rank which render it highly improbable that they will ever be assigned to any duty requiring participation in active military operations in the field may, upon their own application, forwarded through military channels to the Adjutant General of the Army, be excused from the physical test prescribed in this order; but all such officers who are below the grade of brigadier-general shall take the prescribed physical examination."

While everybody desires that our army officers should be picked men and in the prime of condition, certainly no one wishes that the conduct of the army should be characterized by lack of interest in the welfare of the able men who are doing its work.

#### PREVENTIVE MEDICINE. QUACKERY

That portion of your article on "The War on Quacks" which refers to preventive medicine impresses me peculiarly. I have been a country and village family doctor for twenty-five years. I try to keep up to date, use vaccines, bacterins, and all that. I have made it my invariable rule to advise my families, in season and out of season, how to *avoid* sickness; but I must say that such advice has not been acceptable to the average patients.

A great proportion of sickness is due to vicious habits, ignorance or errors of living, and people do not, as a rule, want to be jolted out of their chosen ways of living. Most of them feel like the little boy when warned about too much pie, "Well, give me the pie, anyway, and send for the doctor." People desire to indulge their appetites and passions and then come to us to be relieved of the unpleasant results of their indulgence.

I am not a pessimist—I am getting too much enjoyment out of life for that—but it is a very solemn fact that the average individual wants to do as he pleases. Not until the burden of disease becomes so heavy that it frightens them are people willing to mend their ways. And sometimes not even then!

I can scarcely credit the cynical comments attributed to the average physician on the quack doctors' methods. I do not believe the average doctor is such a commercial mercenary. Maybe I am old-fashioned, for, twenty-five years ago I studied the code of

ethics of the American Medical Association, with comments by Austin Flint. The teachings of that code and the comments were noble, and it does not seem possible that the majority of physicians have so far departed therefrom as your article would indicate.

But so far as the people are concerned, it will be a long time before they are educated sufficiently to be willing to curb appetites and passions, overcome carelessness and negligence, and follow even the common rules of correct living that tend to keep the body healthy and prevent disease.

F. A. COGSWELL.

Rockwell, Ia.

[Doctor, we do not believe that the majority of physicians are either mercenary or cynical. But thousands of us are thoughtless, and careless of our own interests—just like the layman you cite, willing to "let things slide." We need stirring up; we need more of the fighting spirit; and we need more "get together." That this is true is illustrated by the lack of comment on the editorial you quote. Quackery, dishonest quackery—and most of it is dishonest—needs to be met and overcome by the honest and not by the hypocritical, mere self-interested, efforts of a united profession. We should fight the thing that is wrong—but never anyone merely because he is "tapping" our purse. Honesty, square-dealing, truthfulness, good service—these are our best weapons.

Read Dr. Church's letter on this page. His plan is good. Also, read some of the exposures printed by the *Chicago Tribune*, which have been assembled in booklet form by *The Journal of the American Medical Association*. And, by the way, I wish every reader of *CLINICAL MEDICINE* would get a copy of that booklet ("Men's Specialists Frauds") and keep it on his reception-table. The price is 10 cents a copy.—Ed.]

#### ONE WAY TO FIGHT QUACKERY

Have the following printed in your county papers. Let it come from your county society, so it may "advertise" no one man. Ask the editors to furnish you several hundred reprints for distribution:

As physicians, we know that there is very little difference in our medical ability. The difference is on the part of the public—in their minds. Physicians, like other people, are often misjudged, and for this reason we present a few facts for your consideration:

1. When in need of a physician, call the nearest one. This should be done (as a rule) not only in emergencies, but in ordinary sickness.

2. Do not call the second physician on a case until you have spoken to the first one about it. As a rule, the first one will know as much about the case as a dozen other doctors would know.

3. Take the first physician's advice. He's as apt to be right as the second. No physician is anxious to sign death-certificates. For this reason he will suggest consultation when necessary.

4. Bear in mind that all kinds of labor and produce are higher than they were several years ago. Hence, it costs a physician more to live—his drugs, instruments, vehicles, feed, etc.—cost more than they used to; therefore, when the physician tells you his charge is so much, pay it, and don't tell him what it used to be. What we use used to cost us so much, too, but they cost us from 25 to 400 percent more now. Potatoes used to be 25 cents per bushel, they are 90 cents now; corn used to be 25 cents per bushel, we pay 75 cents to one dollar per bushel now; hay used to be \$7 and \$8 per ton, now it ranges from \$12 to \$20 per ton, and in 1911-12 it was \$30 per ton—and we had to pay it, too, or do without. Yet, some people think that physicians should charge no more than they did ten years ago. When a physician charges from 50 cents to \$2.00 more than he used to, he is considered exorbitant. Not so. He is obliged to do so to meet his increased expenses for drugs, instruments, feed, and everything he has to buy.

5. Since miscarriages are more dangerous than normal labor, we charge as much as for normal labor, and sometimes more. Our responsibility is much greater, too.

6. Physicians' charges vary, according to whether the case is infectious, contagious or ordinary sickness.

7. The distance to the patient and condition of the weather and roads are considered in a physician's charge. Hence, some trips may cost more than others.

8. Any reasonable person knows that it is worth more to make a night visit to a patient than a day visit. Therefore night trips cost from \$1.00 to \$3.00 more than day trips in the country. In some counties, a night visit costs twice the price of a day visit.

9. It requires from four to six years of hard work in college, at an expense of from three to five thousand dollars before a physician is allowed to charge for his services.

Therefore don't compare wages for ordinary unskilled labor with fees for medical or surgical service. There is great responsibility on a physician when a life is at stake. When a family calls a physician, the family thereby shifts the responsibility on to the doctor. Be kind enough to the patient and your physician to call the latter early so that he can have a fair chance.

10. Preserve this article for future reference.

O. C. CHURCH.

Greenville, Ill.

#### WHY QUACKERY HAS FLOURISHED IN THIS COUNTRY

There are various schools of medicine practiced in this country, and there is some good in all of them. However, regular medicine, sometimes known as allopathy, is a system the therapeutics of which is so broad as to take in everything of real benefit in the treatment of the sick. Sectarianism persists only because some of us are too narrow to investigate dispassionately the various therapeutic schools and healing fads in order to extract from them all that is of possible merit.

It must be borne in mind that the human being is not a machine and that everyone is subject to some idiosyncrasy. That is true of even the lower animals. This characteristic belongs also to members of our own profession. From time immemorial, in almost all callings, a few have assumed to be the leaders and tried to monopolize the attention of the other members of the profession or occupation which they were following; so that "outsiders" may have no opportunity to demonstrate the value of unusual remedial measures unendorsed by the self-appointed leaders. For this reason, these chosen few brand as charlatanism any attempt to demonstrate values in anything outside of the "regular" channel.

I am nowise defending quacks; still, there are various valuable things that these quacks have taught us doctors, just as Homeopathy has taught us to treat the patient as a human being. Some of the quacks are well qualified to practice medicine, being graduates of excellent colleges and having held internships in first-class hospitals. Some of these men have tried to earn their livelihood by practicing medicine in an honest and ethical way, and then, having found things they thought valuable which they desired to bring to the attention of the public but not being given an



opportunity to introduce these innovations in a "regular, ethical manner," they have been ridiculed, condemned or "read out" of the profession by the powers that be. Inasmuch as self-preservation is the strongest instinct in life, these physicians were led into quackery.

We all remember how we condemned the eradication of hemorrhoids under local anesthesia. We have condemned many other operations under local anesthesia, because such things were not taught in the accredited medical schools. We also have condemned the performing of various kinds of operations unless they were done in well-regulated hospitals controlled by the chosen few. They only were ethical who followed the paths of the presumed leaders and did not think for themselves; the rest of the profession "of course were charlatans," no matter how honest or sincere they might be.

The profession at large certainly does dislike the quacks, not on account of their possible lack of qualifications, nor on account of the size of their incomes, but because they make extravagant claims in newspaper advertisements and deal dishonestly with their patients. But here the question arises whether it is not equally unethical for physicians in good standing to give out for publication statements to the newspapers—statements that, to say the least, are extravagant—which really are advertisements, even if they are not paid for.

To earn a livelihood by practicing medicine, is becoming more difficult from year to year, and for two reasons: first, the economic condition of the layman is becoming more precarious; and, second, the so-called "lights" of the profession are insisting more and more upon a definite, crystallized, orthodox, and undeviating mode of practice and conduct. In order to be recognized by the self-chosen few, you must give up forever your own individuality and must become merely a wheel in the machine, so that when the button is pressed you will respond accordingly. This system has driven more honest, well-meaning physicians into quackery than any other cause.

There is now a tendency in this country to do many operations under local anesthesia, and the scientific reasons for so doing have become very numerous. Local anesthesia is not new, it has been used in this country for years; however, but little attention has been given it by the profession, perhaps because general anesthesia permits more "gallery play" in the hospital amphitheaters—which leads to unnecessary and expensive

operations. Some of our surgeons have pauperized many a man in their efforts to demonstrate their wonderful feats—and articles in lay magazines praise their wonderful work! Of course, these things did not appear in the advertising pages; nevertheless, they have had a very bad effect upon the entire profession, and have driven many a well-meaning physician into quackery.

I believe that much of the work now sent to the "great" surgeons can be done by any well-educated and properly trained physician, in many cases under a local anesthetic. In order to help this class, I have written a number of articles for *CLINICAL MEDICINE*, some of which have already appeared, others to be printed in early issues. This material is to be reproduced in book form. In this book I shall describe many of the operations I have taught for fifteen years, operations that can be performed in a thoroughly scientific manner in the office, so that the patient need not lose time from his regular occupation.

I trust this material may be an aid to the country practitioner as well as to the physician engaged in city practice and whose clients cannot give up their occupations in order to be cured of the maladies here treated of; and I also hope that it may be the means of keeping many a doctor in the regular channels of the profession through showing him a way to financial success.

BENJAMIN H. BREAKSTONE.

Chicago, Ill.

[Readers who remember Doctor Breakstone's surgical articles, published in 1910-11, will welcome more of the same kind. He describes the kind of surgery that the general practitioner should know how to do. We do not advise the average man to experiment with major surgery; this requires much experience and unusual skill. But a little training, a little study, will fit any conscientious physician to "extend the borders" of his capacity for surgical work and add largely to his reputation as well as income. We want to see better men in the profession, doing better work, getting more money. Doctor Breakstone is one of the many contributors who are going to help us bring this about. Are you going to help?—Ed.]

#### SOME OBSTETRICAL DANGER SIGNALS

At a meeting of the Clay-Lowndes-Oktibeha Medical Association, held in Starkville, Missouri, Dr. J. W. Unger read an interesting paper from which we are permitted to quote.

After giving briefly the clinical history of three striking obstetrical cases, he emphasizes the importance of three danger signals in handling cases of this character.

The first danger signal is *high arterial tension*. "No physician does his duty to his patient," says Dr. Unger, "who does not utilize one of the many blood pressure instruments on the market and learn from its reading the patient's danger before it is too late."

The second danger signal is *the presence of acid intoxication*, a condition resembling that found in diabetes and probably representing the imperfect oxidation of carbohydrates.

The third danger signal is *insufficient excretion of urea*. The degree of elimination of this substance, in Dr. Unger's opinion, furnishes an index to the toxic wastes which have accumulated in the blood. Urea is always found markedly diminished in the so-called toxemias of pregnancy, and the amount of urea excreted is proportionate to the condition of the patient.

After discussing the theories relative to toxemia of pregnancy, which he does exhaustively and in a most interesting manner, Doctor Unger concludes his paper as follows:

"I shall now suggest some therapeutic agents which, if discriminatingly used, will save some patients otherwise doomed. Examination of the urine monthly for the first six months and every two weeks thereafter is necessary for the benefit of the physician and the wellbeing of the patient. The patient should be instructed to notify the physician should headache, dimness of vision, edema or jaundice appear, all of which are symptoms of toxemia.

"The urine voided during the twenty-four hours should be measured, and if found scanty and high colored, should be estimated for the total output of albumin and urea with Esbach's albuminometer and Doremus' ureometer. The normal output of urea is twenty to twenty-four Grams in twenty-four hours.

"In view of the formerly expressed opinion that normal excretion does not free the woman from danger, and especially if the urine contains albumin, precautionary measures should be taken by placing the patient on an exclusive milk diet, which serves both as a food and diuretic. I have such confidence in the milk diet, if exclusively and persistently employed, that I am confident that no case of convulsions will occur after it has been used for eight days.

"Should the patient have threatening symptoms, induce elimination with hot packs,

sweat baths, and the use of an alkaline purgative. Experimental research has clearly demonstrated that the autotoxic power of the blood is inhibited by a diminution of its chemical salts; and as Jacques Loeb has shown that sodium chloride is essential to the life of the cell and that it heightens osmosis, and in view of these facts, it may and should be given by hypodermoclysis and enteroclysis. Muscular exertion should not be allowed, thus preventing the development of sarcolactic acid and its introduction into the blood and lymph channels and thereby adding another poison to the already overburdened toxic system.

"Thyroid extract should be given in from 3- to 5-grain doses every three hours, the object of which is to stimulate the adrenal mechanism, thus increasing the autotoxic activity of the blood. For the reduction of arterial hypertension veratrum veride is probably equaled by no other remedy; twenty to thirty drops should be given every two hours per os. After convulsions have developed, from 40 to 80 drops should be given hypodermically. There is a special tolerance for veratrum in eclampsia evidently, because cases have been reported in which 400 drops have been used and the patient recovered.

"Personally, I regard lobelia as one of the best agents we have for the control of convulsions. I have succeeded in several cases with it when all the recognized agents had been used ineffectually. It is the Krupp gun in the therapeutics of eclampsia.

"Next to the aforementioned remedies I shall put chloral and the bromides. Chloroform may be used as an emergency remedy, though it is objectional because it irritates the vaso-motor center and the liver, which makes it undesirable when its use can be avoided. On account of the diminished alkalescence of the blood, alkaline agents are indicated and should be given. Owing to the large amount of lime salts needed in the organogenesis of the fetus, they are required and if given will found to be dissipate many of the symptoms incident to the pregnant state.

"Bearing in mind the possibility of bacillary infection of the overburdened liver and the organ oftenest diseased in the toxemias of pregnancies, methylene blue may be given as a biliary antiseptic. For the septic state of the blood I have given echinacea and with most gratifying results. One other agent I have used to prevent convulsions recurring is copper arsenite. While I might review many

other means and agents which have been employed, those already suggested will be sufficient in the greater number of instances."

#### EXPERIENCE WITH HYOSCINE AND APOMORPHINE HYPODERMIC INJECTIONS

Recently, in a dark-haired, pale-faced, high-strung, but self-controlled woman who could not sleep, I used hyoscine hydrobromide, 1-200 grain, and apomorphine, 1-100 grain, with great success. Even when she had painful attacks of neuralgia I was able to avoid morphine with this combination.

Another woman, fleshy, red-cheeked, light-haired, very high-strung and emotional, without much self-control, was made worse by hyoscine and morphine when she was in pain. But morphine and gelseminine hydrobromide was simply perfect in its action in her case.

Apomorphine also is invaluable in poisoning, spasmodic asthma, crazy-drunks, croup, hysterical attacks, and for emptying the stomach of an undigested meal.

F. A. COGSWELL.

Rockwell, Ia.

[One great advantage the family physician has lies in the fact that he learns to *know* his patients—that is if he is a close observer, as every doctor should be. Dr. Cogswell's experience illustrates the value of working with eyes open.—ED.]

#### THE PAIGE-DETROIT CAR

A subscriber is anxious to learn the experience of the readers of *CLINICAL MEDICINE* with the Paige-Detroit automobile. We shall appreciate it if any of our readers will write us fully upon this subject.

#### THE METZ AUTOMOBILE: A REPORT

You ask for a report on the Metz automobile. I am running my second car of this make and have had it about one year. I have driven it 6390 miles, and our roads average very good, many of them being macadamized. I have kept the car in fine condition all the time, and have kept account of every cent spent. Often I have averaged over thirty miles per gallon of gasoline, and I count on 800 miles per gallon of lubricating oil. The cost for grease is very small.

My car will go wherever there is the slightest excuse for a road. Last winter the continuous "mud-time" was hard on all

machines. My 1912 Metz went 5140 miles, at a total cost for repairs, oil, gas, grease, and so on, of \$95.30. My 1913 car cost, for 6390 miles, \$194.17. Out of that sum, \$112.39 was paid to the agent for repairs, besides \$50.30 (not included in the \$194.17 cost of operating the car) for repairs following two unavoidable accidents.

I usually drive at a 20- to 25-mile rate. The cars have plenty of power and speed, but are very poorly upholstered and assembled. As a Metz repairman put it, "They are just thrown together." They ride hard.

I should like information from someone who has kept a strict account of mileage, operating cost and repairs with a Ford runabout.

H. F. CURTIS.

East Longmeadow, Mass.

#### A FEW GOOD SUGGESTIONS

Preventive medicine is ideal. So is the work of a physician who uses definite active principles, applied to a recognized pathologic condition, based on a knowledge of the positive action of the alkaloid selected. Thus, atropine is greatly preferable to belladonna.

"Anywhere, so it be forward," said Livingston. In therapeutics, this means decoctions and infusions in 1830, tinctures in 1850, fluid extracts in 1880, and standardized galenicals in 1900, on up to the present-day use of the standard itself—the pure alkaloid.

The sedative action of arbutin is due to its property of splitting into pyrocatechin, which has marked antiseptic value. Try it in cystic ulcer, cystitis, pyelitis, and pyelonephritis.

Put down echinacoid as an effective aid in any septic infection. It is devoid of toxic property, but favorably influences chronic ulcers, diphtheria, typhoid fever, erysipelas, stomatitis, and similar adynamic manifestations.

Carsickness suggests *cereus grandiflorus*. We suggest 1-64 grain of cactoid every three hours. In short trips, as in cities, or early in long journeys, a granule every ten minutes usually gives positive results.

Pain is a symptom calling for remedial treatment only when severe. Similarly, urinary acidity demands therapeutic intervention only when it is high. What is the *degree* of acidity in your chronics?

The lactic-acid bacillus makes good butter-milk, but it takes the Bulgarian bacillus for therapeutic effect.

Etiology suggests prophylaxis. Pathology

and symptomatology suggest treatment. And expectant treatment is a misnomer. Doctor, DO something.

Your patient will excuse your failure of diagnosis if only you get him well. Be on familiar terms with your materia medica.

Intestinal asepsis is an impossibility, but intestinal antiseptics goes a long way toward relief. Try out your chronics on this axiom.

Acute abdominal pain is spasmodic nine times out of ten. It has not existed long enough for inflammation to set in. Therefore morphine is not indicated. Give—hyoscine, hyoscyamine, atropine or glonoin.

If your patient shows decreased urinary solids, together with symptoms of poor elimination, boldine is the one drug that will increase output of solids. Other diuretics increase merely the watery element.

FRANK B. KIRBY.

Chicago, Ill.

#### THE NATIONAL ANTINARCOTIC BILL

The members of the Larimer (Colorado) County Medical Society sent the following letter to their representatives in the United States Senate.

FORT COLLINS, COLO., Nov. 15th, 1913.

*Hon. Chas. S. Thomas, and Hon. John F. Shafroth, United States Senators, Washington, D. C.*

DEAR SIRS: Some time ago the House of Representatives passed the Harrison Bill (H. B. 6282), which is now pending in the United States Senate. This bill was drafted by the National Drug Trades Conference and endorsed by 14 of the 15 members of that body. It carefully regulates the buying, selling, handling, dispensing, and administering of these agents, thereby guarding the interests of the individual and society, while at the same time leaving the physician free to dispense them when they are needed to relieve human suffering.

At the recent meeting of the National Association of Retail Druggists (Cincinnati, Aug. 25-29, 1913) a resolution was adopted to amend the Harrison Bill in such a way as to prevent or hamper the physician in dispensing or administering such remedies to his patients.

You are well enough acquainted with the isolated condition of a large part of our population and the long distances that many of them live from drug-stores or dispensing pharmacists to know that any restrictions placed on the physicians' right to use these remedies without having them dispensed by the druggist would not only work an injustice on every practicing physician, but would greatly increase the suffering of the sick and injured and cause the loss of many lives, especially in rural and sparsely settled portions of the country.

Then, too, it should not be forgotten that much of the uses and the demoralizing and deadly effects of these habit-forming narcotic remedies are directly due to physicians' prescriptions; these prescriptions are often [re-] filled by the druggist without the knowledge or sanction of the physician, or, in many cases, the patient seeing what has been

prescribed for him, buys the drug on his own initiative and soon becomes a drug-"fiend." Probably more than fifty percent of these saddest of all wrecks of our civilization have been made in that way. If the physician had quietly administered the remedy necessary for the occasion, without the patient knowing what he or she was taking, these wrecked lives would have been avoided.

In view of these facts, we, physicians of Larimer County, strongly oppose any amendment of the Harrison Bill, which will restrict the right of the physician to use these narcotic remedies in any way that he may believe to be for the best interests of his patients; and we hereby petition and request that you oppose any such amendment of H. B. 6282 and use every honorable effort to secure the passage of the bill as it was passed by the House of Representatives.

Thanking you in advance for your valuable assistance in securing this object and with sincere regard, we remain, very truly yours,

(Signed)

P. J. McHugh, Ex-President, Colorado State Medical Society; Geo. L. Hoel, President, Larimer County Medical Society; E. Stuver, Secretary, Larimer County Medical Society.

E. L. Sadler, W. A. Kickland, W. H. Winslow, T. C. Taylor, J. E. Dale, S. C. Halley, members, Larimer County Medical Society.

E. STUVER,

*Secretary, Larimer County Medical Society.*

[We have just returned from Washington, where we were in attendance upon another meeting of the National Drug Trade Conference, which represented all branches of the drug trade, as well as the A. M. A. Among the many important topics discussed was the Harrison Antinarcotic Bill, referred to in the letter (just quoted) addressed by the Larimer County Medical Society to the two senators from Colorado. The Conference, after carefully canvassing again all the objections to the bill, and making a few minor changes, none of which will affect the interests of the physician in the slightest, reasserted its allegiance to the measure.

The bill is a straightforward, intelligent effort to secure the abatement of a great evil. It should be passed, and passed at once. While it places a burden upon the medical profession this burden is not a heavy one, and we can not see any good reason why any physician in the country should withhold his support of it. Make your support *active*. Do not leave it for others to get behind it; get behind it yourself, and urge its passage. Write to your senators and tell them that you want this bill. Tell them that you want to see it passed at once, and that you and other members of the profession will object strenuously to having any amendments tacked on to it that will interfere with your rights as a physician. Read what the physicians of Larimer (Colorado) County have



said on this subject. Take the matter up at the next meeting of your society.

Now, Doctor, this is important. It is not a matter to be put off. Get your shoulder under this movement without delay.—Ed.]

### IS THE DOCTOR LOSING PRESTIGE?

We think that the doctors have lost prestige in several ways, and for several reasons. The first cause of this loss is competition in its various forms. The numerous new cults, all claiming to heal the sick, draw heavily on the doctor's reputation and purse. The cults, to build themselves up, do all they can to pull the doctor down. To get his fees, they must offer something instead. They must convince the patron that they have something better; to do this, they must either have it or fool the patron.

Individually, I do not think any of the modern cultists has any advantage over the regular practitioner. I think the latter is better fitted, as a rule, to relieve suffering humanity than any or all the cults combined. Yet, what you or I think about it does not count, it is what the patron thinks that puts money in your pocket or the other fellow's.

The faker takes advantage of the credulity of the average patient. It seems that otherwise intelligent individuals are uninformed about disease; they accept a wordy diagnosis, accompanied by a few technical terms, as evidence of medical knowledge. To illustrate:

There was a certain wit in Kentucky who got off something like this:

"Doc (talking to me), I believe I'll study dentistry."

I asked, "Why?"

"Well," said he, "you know A and B and C?"

I said, "Yes, I am treating them for lacerated jaws."

"Well," said he, "this is what caused me to want to study dentistry. A, B, and C allow themselves to be butchered by a man calling himself a dentist, and they take it so kindly, and seeing (as I do) that it does not take a very smart man to get their money, I am thinking of studying dentistry myself."

Almost anyone that tries can get the money, and the money is a lever that moves most movable objects. If one is willing to sacrifice principle, he can get money from those who are afflicted. The drowning man grabs at a straw, and the cults are always willing and ready to furnish the straw.

Of course, this is not a story of recent origin. The quack has always been in evi-

dence, but he is more numerous and more ubiquitous now than formerly. I need not point out his special schemes, you are familiar with them.

I notice in our state organ, *The Missouri State Medical Journal*, an article by our colleague Doctor Boone, which calls attention to the fact that our associate and brother, the surgeon, does not always give us a square deal and that we have lost more or less prestige through the schemes of those who pose as surgeons, but who really are not. This is not new, either, but doubtless it often does injure the doctor.

One remedy is open to us for this. If the surgeon will not or can not do your surgery, you must learn to do it for yourself; but for the prestige lost by the schemes of the quacks there is no remedy. The dishonest schemer will always get more money than you—you might as well submit first as last, because this is inevitable. You *can not* and you *will not* sacrifice principle, and he will, and as fast as you show him up in one line he will adopt another. It is possibly not best to sit down and let the schemer run roughshod over you, but to undertake to expose him is an unthankful and unprofitable job.

The keen competition in legitimate practice is against the old doctor. Unless he is fullhanded, he cannot withstand it. The strain is too great. He may feel some chagrin in seeing the young and often incompetent doctor forge to the front, but he must recollect that in his young days he too was green and had to fight a hard battle to win.

The last question to which I would call attention is the cutting of fees. I know that it is unpleasant to sit idle in your office while the fee-cutter seems busy among your former patrons, and you may be tempted to "go and do likewise"—but, brother, do not yield. Two wrongs never make anything right. Do not sacrifice principle for money, because without principle there is no protection in any direction. If you cannot depend upon the honor of your colleagues, you are virtually ruined as a physician, and if you sacrifice your own honor, you cannot expect them to stand by you in the hour of need.

No—No—. If you must go to the wall, go down like a man. Failure is no disgrace if caused by unforeseen and uncontrollable circumstances. You can, possibly, recover from failure, but dishonor will follow you to your grave. Stand by your colors. Never allow yourself to do anything that will bring reproach upon your profession. To cut



prices, in my opinion, is wrong in principle. Let me give you another illustration.

Recently a member of the Maccabees said to me: "Doc, you would be \$50.00 ahead today if you had become our examiner."

I said, perhaps so; and asked who was the lucky man. He named Dr. John Doe, and I said, "Yes, I understand that Doctor Doe has broken over."

"Yes," said he, "and I understand that all the other doctors have broken over, too, and you ought to have yielded when I asked you, because you know that you can get more patronage in the lodge than out."

Here is how we lose patronage and prestige: we yield, and yield, and cut, and cut—cut each others' throats, until the price for our work is set by quacks and there is nothing left to the practice of medicine.

I for one do not intend to yield. If I go to the wall, which seems very likely, I shall go fighting for every inch of ground and shall charge legitimate prices for what I do, and if I can not make a living at the practice I shall quit and try something else. I will not be a pretender and cutthroat.

W. P. HOWLE.

Charleston, Mo.

#### THE TREATMENT OF DROPSY. VIN-EGAR HOT-PACKS

In the following I submit a brief record of two cases of general dropsy which came under my observation. The first case is that of a man of 79, who had been under various treatments for several months before I was called.

This man had dropsical swelling involving face, arms, legs, feet, hands, and genitals. His pulse, when he was first seen, was very feeble, irregular, and ran about 120 per minute. There was enormous distention of the abdomen, this extending to the penis and scrotum. He had uninterrupted dyspnea. On both legs, from thighs to knees, the skin was distended almost to bursting in two or three places; the distention involving also the palmar and dorsal surfaces of both hands, which he could close only with difficulty.

He had been unable to lie down on his back or undress and go to bed during the last seven months. All this time, night and day, he had been suffering from loss of sleep, lack of appetite, and great difficulty in passing water, which was scanty, high-colored, thick and stringy. The only repose he got was in a comfortable easy-chair; but his naps were interrupted every fifteen or twenty minutes,

having to arise frequently and have the windows opened for fresh air, because of the intense dyspneic attacks.

This serious condition, when I first reached his side, convinced me that his days were numbered, and could hold out but faint hope of any relief. After abdominal tapping, about two weeks before, my predecessor, I was informed, also had given up the patient.

As the patient's bowels had been much constipated, I gave him 10 grains of calomel, and directed that this be followed in a few hours by a large dose of magnesium sulphate. I gave instructions that, after the purgative had acted, he be given every three hours, day and night, half an ounce of gin, blended with raw egg, milk, and cream. This because of his exhaustions. Happily, his stomach tolerated this stimulant.

To improve the action of the kidneys, I left with him a supply of anasarcin, one tablet to be taken every four hours, night and day, for three days, then less often. The gin stimulant was to be kept up as needed and the epsom-salt purge to be repeated every third morning.

I made my second visit six days later and was both pleased and surprised to find a decided change for the better. The patient had been able to lie down on his back for an hour or more in the past two or three nights, securing at last refreshing, although intermittent, slumber. The urine was much clearer and passed more freely, although at my first visit urinating nearly caused him to collapse. Also, his pulse was fuller and stronger, and the rate was reduced to about 100 per minute.

I ordered the anasarcin to be given less frequently—one tablet morning, evening, and midnight. Of the gin, he was to be given, each day, one ounce in a part of the egg-mixture.

After the expiration of two weeks, improvement was proceeding without interruption. I now ordered the tablets to be taken only twice a day. I also put him on iodized calcium. Then, after another week, one anasarcin tablet was to be taken every night; also, moderate doses of tincture of chloride of iron after meals. As improvement continued, while withdrawing the alcoholic stimulant, the patient was put on a mixed diet embracing vegetables, chicken, beef-tea, and brown bread.

One month from my first visit the man's bowels and kidneys became quite normal; so I dropped the anasarcin. He rapidly regained health and strength, and at the end of two months took daily walks. When I

last saw him professionally, a few weeks later, he seemed in perfect health, outside of a little irregularity of the pulse, which, however, soon yielded to cactin. After another month, on his returning from a visit twenty miles from home, he assured me he was entirely free from any symptoms of his recent trouble; and he began to assist in the work on his farm. About six months after his complete recovery, I happened to meet him, when he assured me he was enjoying better health than at any time the past three years.

The other case is that of a little boy aged 19 months, who previous to my visit, early in September last, had been ill upward of two weeks. I found him suffering from a severe attack of bronchitis, with moist and crackling râles over both lungs; high fever, skin hot and dry; very rapid pulse. He had been very restless the past three or four nights, with hardly any sleep. The child's face was puffy and edematous and the abdomen distended. He had been passing but little water of late. Both kidneys proved to be very tender.

I staid over night and subjected the little fellow to the treatment described below; the nature of which has been published in two or three other medical journals.

Not to take up too much space, I will mention very briefly here that the method is more particularly useful in shortening the progress, and, in the majority of cases (when employed during the first twenty-four or thirty hours after the premonitory chills), in aborting attacks of acute disease of inflammatory as well as of zymotic character, together with convulsions, whether infantile, eclamptic, or from whatever cause.

Proceed as follows: In a wide pan, heat a quart of good home-made vinegar to the boiling-point, plunge one by one into the steaming liquid six or eight heated bricks, quickly take them out again, and as quickly wrap them in folds of woolen or flannel cloths, pouring over the latter what hot vinegar remains.

Now carefully arrange these bricks about the patient's body—above the shoulders and close to hips, thighs, and feet—being careful, though, to have the attendant slip her hand as often as requisite under the steaming-hot sheets of the bed covering, to make sure that none of the hot bricks touch the skin. (This little precaution of course is necessary.)

After being well enveloped in flannel sheets, let the patient—old or young, sthenic or asthenic—sweat at least two hours before removal. And such a profuse perspiration as is induced over the entire body is possible

otherwise only with pilocarpine, and that often is not safe in the very young or the aged; and frequently for hours afterward the skin remains moist.

There must be something in the acetic acid of the vinegar that so freely opens the pores. It may be advisable to remove the saturated blankets, but it is not absolutely requisite if the room be kept warm, well ventilated, and, of course, avoiding any draughts.

This method of elimination by the skin certainly acts like a charm; and, as already intimated in my paper in your issue of last January, it will control convulsions of every kind, even those arising from swallowing poisons; as has been well tested and proved during a practice extending over fifty years. I forgot to mention that in the case of young children one should break up the bricks into small pieces.

After the foregoing digression, let me proceed with my report. I used broken pieces of brick about the size of an egg (porous sandstones will answer in case of emergency), and personally looked after the application. At the expiration of thirty or forty minutes, there appeared a profuse sweating; which set in at first—as often is the case—from head, neck, and face. In about two hours, welcome sleep supervened, this lasting some hours into the following morning.

I kept up counterirritation for the next two or three days over chest, front, back, and sides; also over the loins, alternating with mustard cataplasms as frequently as the child could bear them. In the course of another week, without the use of any expectorants, under anasarcin—1 1/2 tablets dissolved in 4 ounces of a sweetened mixture and given in teaspoonful doses—rapid improvement followed. As convalescence advanced, this was replaced by iodized calcium, together with syrup of ferrous iodide thrice daily.

I feel quite confident, despite the length of time intervening—nearly a fortnight from the initial chills—before my first visit, that the free vinegar-sweat was the principal factor in the satisfactory results; modifying the severity of the attack, and, with the alterative tonics afterward, bringing about rapid recovery. I might here state, soon as patient is comfortably packed for the vinegar-sweating it is advisable to administer a cupful or more of hot lemonade or other warm drink containing a few drops of tincture capsicum.

In conclusion, let me here say, that, in all cases of nephritic dropsy associated with

scarlatina, this sweating-method is effectual, the same being repeated, if need be, and followed by tincture of iron chloride. In point of fact, almost every acute case of disease associated with chills, high fever, and rising temperature when seen within forty-eight hours of onset can be quickly aborted. In scarlet-fever it is often advisable to repeat the sweating process, after an interval of two or three days, followed up with chloride of iron tincture, with or without a little spirit of nitrous ether.

A. H. CHANDLER.

Cocagne, N. B., Can.

#### TRACHOMA TREATED WITH THE BACILLUS BULGARICUS

Being a general practitioner, naturally only a few cases of trachoma have come to me for treatment, and most of those that do come are immediately sent to a specialist for treatment. So, like most others in my line, I gave but little thought to the disease. However, one or two of my patients insisted that I treat them, saying that I could do as well as the other fellow and that they were not able to go to anyone else. This put me to thinking, and I read everything I could find on the subject and tried the different treatments recommended, with the result that, if there was any improvement at all, the patient would soon relapse and be as bad as ever.

The best information I could get from the latest and most up-to-date literature as to the etiology of the trouble was, that it was caused by a specific organism not yet isolated.

I next decided to look a little further into the treatment. I reasoned, since this was a germ disease and since the Bulgarian bacillus had proved such a friend to man in exterminating germs that are foreign to him, that it would seem reasonable to think that this malady might be treated with this same agent. Acting on this theory, I began treatment and secured what I considered extraordinary results.

Dorothy B., aged 8, had trachoma since she was two or three years of age and had been treated for two years by her grandfather, who was an excellent physician. After his death she fell into my hands. I tried to send the family to a specialist, but they would not go. I then proceeded to treat her as best I could.

I used copper sulphate every other day for almost a year, with practically no result. I

tried silver nitrate, bichloride of mercury, argyrol, protargol, and every other thing that I could find recommended; but all to no avail. Then I looked into the cause and treatment as above stated and decided to try the Bulgarian-bacillus tablets.

Accordingly, I reduced a small portion of a tablet to fine powder and turned the eyelid as if to burn with bluestone and put on the powder. Very much to my surprise, the little girl said that it did not hurt any. I informed the parents that it was an experiment with me and for them to apply the treatment twice daily for a while and report progress. Very much to our surprise, there were marked signs of improvement from the start.

The morning-blindness was soon gone, the photophobia all disappeared, the inflammation left the lids. The patient now reads by artificial light without any discomfort whatever, and one cannot tell by looking at her eyes that she ever had trachoma or any other eye trouble. She has been on this treatment for about two months and is still taking it, but will stop soon. Whether the trouble will return is more than I can say.

This is only one case, but the results were so gratifying that I thought I would report it, in the hope that others may try it and prove the value or nonvalue of it. I should be pleased to hear from others trying it or who have already tried it.

A. W. DAGGETT.

DuQuoin, Ill.

#### THE ETIOLOGY AND TREATMENT OF PELLAGRA

At the last Pellagra Conference, held in Spartanburg, South Carolina, as reported by the *Winnsboro News and Herald* of September 11, 1913, Dr. Ward J. McNeal, of the New York Postgraduate Hospital, and a member of the Pellagra Commission, made the following announcement:

"After two years of research by a corps of twenty scientists, the Thompson-McFadden Pellagra Commission is still ignorant of the cause of the disease."

Doctor McNeal summarized the findings of the Commission as follows:

"First, the supposition that the ingestion of good or spoiled maize is the essential cause of pellagra is not supported by our study.

"Second, pellagra is, in all probability, a specific infectious disease, communicable by means at present unknown.

"Third, we have discovered no evidence incriminating buffalo-gnats in the causation of pellagra. If it is distributed by a blood-sucking insect, the stable-fly would appear to be the most probable carrier.

"Fourth, we are inclined to regard intimate association in the household and the contamination of food with the excretions of pellagrins as possible modes of distribution of the disease. If you remove a pellagrin in the early stages of the disease from the endemic locality of the disease, put him in better surroundings and give him plenty of good nourishing food, regardless of treatment, he will get well and stay well.

"In view of the slight mortality from pellagra and the pessimistic feeling in regard to it, this should be a comforting thought to us. It should also be comforting that pellagra is not directly transmissible from one person to another."

I wish, next, to quote two sentences from my article, "Pellagra Cured by Dietetic Treatment," printed in *CLINICAL MEDICINE* for June, 1913:

"There is no drug cure for pellagra, but it is the most easily cured disease of which I know. The prevention of pellagra is easy, and this dreaded malady can be swept off the face of the earth simply by teaching people the right things to eat."

Compare those two sentences with the fourth statement of the Commission's findings. I am especially grateful for "Fourth." That states in plain language that pellagra is chronic starvation as regards protein; a claim that I have heretofore hesitated to make.

We have all been brought up to believe that omnivorous means, "Can eat everything," but are now finding out that it ought to mean "Must eat everything"—the "everything" meaning protein, fat, and carbohydrates in proper proportions, than which there is nothing else to eat. Of course, these must be eaten in a balanced ration, if the best work is to be derived from the human machine.

But the Commission's "Fourth" suggests an endemic or an epidemic or a pandemic influence in "chronic starvation," which knows no climate nor country. An acquaintance with the work of the Germans on "the minimum daily requirement of albumin" in diet would save confusion in studying and legislating for the benefit of pellagrins.

It is not flattering to think that in America there are one hundred thousand or more persons who through poverty or ignorance, or both, are suffering from chronic starvation.

Be it right or wrong, it is a remarkably successful theory by which to be guided in caring for those subjects, as has been amply tested in the last ten years, although I should not have ventured to state the situation quite so plainly but for the "Fourth" of the Commission's findings.

The Germans have called fat and carbohydrates protein savers, but have also shown how far it is safe for these articles to be used for such purpose in the daily diet. They have also shown as much opportunity for a discriminating intelligence in prescribing proteins as is found in the use of rochelle, epsom or glauher salt, or of any combination of them in therapy.

Let us recall what involuntary experiments appear to have contributed to the solution of these questions. Some of them have been tremendous in extent, affecting millions of people. Recall the production of that double-first cousin of pellagra, i. e., the scurvy of the sailor and of the Arctics. Recall the rice diet of the Chinese and the diseases recognized as incident thereto. Recall the excessive protein diet of the English peoples, and how widely the usual resulting diseases differ from those peoples whose diet is deficient in protein; and now, the diet being changed to one of less protein content, pellagra is appearing among them.

Consider the vigor of the Japanese, their immunity against disease, the capacity shown by them to repair the most severe wounds received in war. Their diet includes soy beans, rich in protein, say, 28 percent, and gives them a nearly perfect balanced ration. Consider also the many patient experiments of the Germans, as narrated by Doctor Weintraub, of Weisbaden, which show that the minimum daily requirement in albumin for an average laboring man is about three ounces, if good health is to be maintained.

But when we asked why poor health resulted from diminished amounts of protein we had to await the investigations of Starling and Bayliss, the English physiologists, before we could understand that a proper amount of protein in the diet was necessary to maintain the normal action of the liver, upon which nearly all the great functions of the body are dependent.

Consider also the innumerable "tests" and futile "attempts" of our American patient microscopists and chemists to find the source of contagion in the spread of pellagra. Consider then how Doctor Lared ingested the acids resulting from the decomposition of fats, experimentally, with the consequent develop-



ment of the symptoms which I showed, at the Pellagra Conference held in Columbia four years ago, were the *early* symptoms in pellagra. Up to that time the symptoms of pellagra were not recognized.

As the time and facilities of that Conference were so seriously taxed, my paper was withdrawn and published by *The Charlotte Medical Journal*.

C. S. PIXLEY.

Winnsboro, South Carolina.

#### IN THESE DAYS

(Author unknown.)

Said a youth, in fashion dressed,  
To the maid he loved the best,  
"Oh, say the word and name the day when we two  
shall be one!

I've a first-class pedigree—  
There is royal blood in me—  
And my father is a millionaire, and I'm his only  
son."

Said the maiden, "All your wealth  
Is as nothing, without health;  
The blue blood that you boast of has for me but  
small attraction;

If you want to marry me,  
Some good doctor go and see,  
And bring his written statement of your Wassermann reaction."

#### NOVEL UNGUENTIFORM OXYURICIDE: A NEW TREATMENT

Oxyuris vermicularis—the common pinworm—is one of the most troublesome intestinal parasites, and withal one of the most difficult to get rid of; the latter fact, not alone for the well-understood anatomical reasons, but principally because of the almost unbreakable vicious circle maintained by reinfection from the hands through the mouth.

Internally administered, anthelmintics act upon the pinworms very uncertainly, while enemata cannot completely dislodge them, by reason of the colonic plications. But for the latter fact, plain water irrigations alone would suffice, while even absolute cleanliness about the buttocks and of the hands and garments would effect a cure; indeed, Heinsberg himself saw a case where a badly infected victim became completely freed during the surgical cleanliness imposed, aided by the bandage covering, after an operation for hemorrhoids—the infectory cycle simply was broken and no new colonies were being originated. Hence, internal medication is not indispensable.

Starting from the foregoing premises, Doctor Heinsberg (Freiburg i. Br.) reasoned (following others) that, inasmuch as people

cannot be brought to carry out the rule of absolute personal cleanliness, at least moderate, enforceable, habits might be reinforced by means of some external regimen; and, so, he began to experiment in this direction. His success seems to have been most gratifying, if we accept statements, published in the *Muenchener Medizinische Wochenschrift* (1913, No. 3), by Dr. B. Hildebrand, of Freiburg, who took up this subject.

The idea, in a nutshell, is, to destroy any worms and eggs that may become deposited externally to the anus. Already ointments of mercury and silver nitrate had been suggested for this purpose, but Hildebrand found them too irritating and not at all reliable, while at best requiring a prolonged course. He then experimented with the vermicide thymol, finally arriving at an unguent which during the last two years in his hands has proven absolutely effective in even the most inveterate and obstinate cases of oxyuris infection. There must, of course, be accessory treatment.

Doctor Hildebrand does not publish the exact formula, but he names, as the active ingredients of this oxyuricide ointment, thymol, quinine, and camphor. (He calls it unguentum chinini camphoratum compositum, and a local apothecary markets it as a specialty under the name of "vermiculin.")

This inunction-treatment is simplicity itself. Every morning and evening the anus and the surrounding area—not neglecting the folds of the genital region—are thoroughly washed with one or two changes of warm water and soap, then wiped dry with a fresh clean cloth or some tissue-paper; then a little of the ointment—from pea- to cherry-size—is smeared all over the cleaned parts, especially about the anus. It is best to attend to this after the regular stools; but, at any rate, the operation must be repeated after each and every defecation, so as to be sure of destroying any worms and parasites coming outside.

That is all the direct treatment involved. In addition, though, the patient immediately must thoroughly clean hands and, especially, the finger-nails, with warm soap-suds and a nail-brush; which performance also is necessary before taking food or preparing any for the table. While the author does not so state, a slight inunction of the hands (fingertips particularly) ought to be helpful.

From two to three weeks of this procedure will effect a complete eradication of the oxyuris. Of course, frequent full baths, with soap and borax, besides changing the undergarments and bed-linen, would make assur-



ance doubly sure. Wearing of a bathing-trunk in bed also would be an aid to prevent the hands from becoming infested. To the foregoing we may add that, for the sake of "impressing the patient," internal medication need not be excluded, using any favorite vermifuge for the purpose; also prescribing wormwood or quassia enemas. Still, Heinsberg has confined himself to the thymol ointment for fully two years.

#### ABOUT VARIOUS THINGS—BUT MOSTLY THERAPY

Tonsillitis—that is a joke nowadays. Does any doctor have any trouble in treating this condition? I used to be a chronic, myself, with this, it laying me up quite often. No, I still have my tonsils, and they are not hypertrophied, either. I like the good fee for removing these glands, but I like the results and the praise from my treatment better. Here it is:

Thorough cleaning out, very spare diet, aconitine for fever, bryonin, atropine, and mercury biniodide every one-half to two hours. Cold applications to neck, peroxide as gargle, or no gargle at all—and results have never failed me in hundreds of various kinds of cases. Rheumatism complicating tonsillitis should have appropriate remedies. I consider colchicine, strontium, and lithium salts of value then.

I believe calcidin is one of the best things in winter-coughs. Chronic bronchitis responds very rapidly. Dose enough. Sodoxilin does the work well in my hands in cases of auto-intoxication, but many people complain of the strong aromatics it is fixed up with. I give it quite often with saline laxative, half and half.

Somebody suggested agar-agar for constipation, advising eating a handful a day. Liking the theory advanced, I ordered some, and they sent it powdered and granular. I tried to see how a mouthful would act, and I had a hard time getting the glue-like stuff off my teeth. It made me laugh, so, thinking that I wouldn't be made fun of by my patient on that score, I sent the stuff back. Not ten days from then a lady came to me with a lot of it in a stringy form, saying her doctor, who is one of the surgical luminaries here, advised her eating it. I suggested her feeding it to the goats and placed in her hands a supply of agar lac, a proprietary that not only is easy to take but also is good in its action. [Doctor, if you had soaked that granular stuff in a little hot water, with a

little sugar and any convenient flavoring you would have found it a palatable "jelly," of real value in treating constipation. See Dr. Perry's article, this issue.—Ed.]

Not long ago I was out on a business trip about forty miles from nowhere. I always carry a few medical and surgical supplies along, looking for a chance call. It came this time, too, but I was not properly prepared. My fault.

The wife of a sawmill hand was trying to abort. I found the fetus grasped in the mouth of the cervix. After a hypodermic of hyoscine-morphine-cactoid and sterilizing my hands in a tin pan that was being used by all, I went up into that uterus. "Fool," you say? I thought so, too, but there was nothing to do but the best possible then and there, as the roads were too bad to get any place better within twenty hours.

After much work I got all I could with my fingers, but my nails were so short I could not use them as curette, and I was without one; so, I wrapped my fingers with sterile gauze and wiped out that uterus. Yes, that woman got well, and for pay I got a lot of promises. Why do so many of our worst cases happen with poor people and deadbeats?

How would you eye-men transpose a prescription for glasses like this: + 3.00 Sp. (1)–7.00 Cy. axis 180°. Give your rule. Yes, I proved it out O. K. Have you? Why does the law allow so many optometrists to be fitting people's eyes, when they overlook astigmatism in a big percentage of these cases?

Do you have any trouble with ammoniacal urine in children? Can worms cause this? What do you think about it?

F. E. McCANN.

Bozeman, Mont.

#### OUR LONDON LETTER

At the annual dinner of the London School of Tropical Medicine, it was announced that, as the result of a generous grant from the board of education and the remarkable success that had attended the appeal for funds made by Mr. Austen Chamberlain, M. P., the school had made a considerable advance. Mr. Chamberlain, in proposing the toast of the school, referred to the great advances made in the study of tropical medicine during the past twenty-five years. They had set out to obtain the sum of \$500,000 for the school, and they had received, so far, the not inconsiderable sum of \$350,000. They were devoting \$75,000 to extension of the buildings, the

staff of the school was being strengthened, and an endowment of \$9000 annually was being made by setting aside capital and by further sums contributed for that purpose.

The speaker was particularly touched by letters received from many tropical dependencies of the Crown in which the writers sent their humble contributions. There had been a most cordial response also from the tropical colonies to an appeal made by the colonial secretary. When the Federated Malay States were asked whether they would be willing to vote \$2500 of public money to the fund, they cabled that in view of the importance of the work to them the unofficial members of the fund had suggested making a grant of \$25,000. Because of the special efforts made by Mr. Austen Chamberlain, it was stated that one of the wards in the hospital would be named the Chamberlain ward. The dinner was made the occasion of a presentation to Sir Patrick Manson of two portraits of himself—one presumably to remain in the hospital and one for his own house.

A little girl twelve years old living in a village near Amiens, France, has been charming the lovers of the weird and occult by producing letters and words on her skin, in that way answering questions put to her. Her "occult" powers first came out when she showed her school-mistress a branch of a plant resembling mistletoe traced in red lines on her arm. She became a nine-days' wonder, to the edification of the faithful, the delight of the mystics, and, it is said, the bewilderment of the doctors.

But, alas! vaulting ambition doth o'erleap itself. Not content with her little Picardy audience, this prophet in her own country (surely, a *rara avis*) needs must go to Paris. At Paris she was investigated by a medical committee. Then, a member of this committee observing that the manifestation occurred only on regions of the girl's skin that could be reached with her right hand grabbed that hand and found concealed in it a hairpin. The thaumaturgic girl was a subject of dermatographia, an art she had learned to exploit ingeniously by scratching the skin with the hairpin.

In a previous letter I referred to the fact that, as a consequence of the resolution passed by the International Medical Congress in London last August urging upon the various governments the need of taking action to check the venereal peril, it had been an-

nounced that a royal commission would be established in Great Britain to give effect to this resolution. This commission was appointed by the King on October 28, the terms of reference being as follows:

"To inquire into the prevalence of venereal diseases in the United Kingdom, their effects upon the health of the community, and the means by which those effects can be alleviated or prevented, it being understood that no return to the policy or provisions of the Contagious Diseases Acts of 1864, 1866 or 1869 is to be regarded as falling within the scope of the inquiry." (The acts referred to ordered periodical inspection of prostitutes at certain naval and military stations. They were bitterly opposed and were subsequently repealed.)

The commission is constituted as follows: Lord Sydenham of Combe, the Rt. Hon. Sir David Brynmor Jones, Sir Kenelm E. Digby, Sir Almeric Fitzroy, Sir Malcolm Morris, Sir John Collie, M. D.; Arthur Newsholme, M. D.; Canon J. W. Horsley; Rev. J. Scott Lidgett; Frederick Mott, M. D., F. R. S.; Mrs. Scharlieb, M. D.; James Ernest Lane, F. R. C. S.; Philip Snowden, Mrs. Creighton, Mrs. Burgwin. Secretary, E. R. Forbes, of the Local Government Board.

It would have been difficult to frame a more representative commission. The ladies are all identified with social work. Of the lay members, all have had previous experience on royal commissions or have held public posts that afforded them special opportunities of obtaining first-hand information on the subject, while the medical members are exceptionally strong. It was Sir Malcolm Morris' letter to *The Times* that first set the ball rolling. Sir Malcolm, besides, has an international reputation as a dermatologist. Mr. Lane is senior surgeon to the London Lock Hospital, Doctor Mott is a noted alienist and Mrs. Scharlieb an eminent gynecologist, while Doctor Newsholme is chief medical officer to the Local Government Board and examiner in public health and preventive medicine both at Oxford and Cambridge.

The Insurance Act still continues to agitate the public mind. It is becoming clear to everybody that the actuarial estimate on which Lloyd George based his calculations as to the probable sickness incidence were grossly underrated—exactly as the medical profession contended at the time. One friendly society in the west of England reports that the accident and sickness benefit for the six months

ending July last was 24 percent in excess of the actuarial estimate and that for the nine months ending September a loss of \$50,000 had occurred to that society. And this is, by no means, an isolated instance.

The bitterness and rancor originally aroused by the act and sustained by the innumerable instances of the gross injustices constantly effected by its working, will hardly be lessened by Mr. George's cynical admission at Oxford, on November 22, as found in these words: "If you had had a plebiscite of the people on the Insurance Act when it was passing through the House of Commons, I believe it would probably have been thrown out." The most unscrupulous of all tyrannies is that of an autocratic bureaucracy evolved by a "representative" government—the while it lasts.

—“M.”

#### CLINICAL NOTES FROM BENNETT MEDICAL COLLEGE

Many a patient can be saved from undergoing a mastoid operation by the continuous application of ice in the mastoid ice-bag for three to six days. But the cold must be absolutely and uninterruptedly continuous until the inflammation subsides.

—S. S. Bishop.

Recurring tonsillitis is likely to be due to retained secretions or concretions in the crypts of the tonsils. These should be washed out, and a 10-percent solution of silver nitrate thoroughly applied. This failing, the electric cautery should be used in the crypts. If this treatment does not succeed, remove the tonsil.—S. S. Bishop.

The best way to remove cerumen from the ear, without injuring the tissues, is to fill the ear-canal with warm dioxide of hydrogen solution; wait until effervescence ceases; then syringe with two quarts of water as warm as can be borne comfortably.

—S. S. Bishop.

In treating fractures of the nasal bones, do not wait for the swelling to subside before attempting reduction.—C. W. Clark.

Operative treatment is contraindicated in:  
(1) In fractures of the patella that occur in

diabetic patients; in those patients having advanced tuberculous disease; in patients suffering from well-developed cardiac, renal or hepatic disease. (2) In closed longitudinal fractures with no displacement or with but slight lateral displacement. (3) In all sub-aponeurotic fractures. (4) In all incomplete fractures. (5) In all patellar fractures in which the separation of the patellar fragments is so slight as to be barely detectable. (6) On patients who prefer to pass their lives partly disabled rather than to run the minimal dangers of an operation.—Heineck.

In varicocele of the veins of the spermatic cord, relief by operative means is indicated in all cases: (1) In which there coexists an inguinal hernia of the same side. (2) In which there coexists on the same side a hydrocele of the tunica vaginalis testis. (3) In which there is present on the same side an encysted hydrocele of the spermatic cord. (4) When associated with or dependent upon the presence of a tumor of the spermatic cord. (5) In which there has been an accidental or spontaneous rupture of one or more veins of the affected spermatic cord. (6) Having a history of recurrent attacks of phlebitis and thrombophlebitis. (7) That show more than a moderate degree of venous dilatation and tortuosity. (8) That are productive of neuralgic pain. (9) That are associated with nervous disturbances. (10) In which the nutrition of the testis is threatened.

—Heineck.

Every hernia of the fallopian tube, of the ovary, and of the tube and ovary, irrespective of anatomical site or of size, or of age of the bearer should be subjected to an operation for radical cure: (1) If the hernia be irreducible. (2) If the hernia be strangulated. (3) If the pedicle of the herniated organ or organs be the seat of torsion. After the age of two years operation is indicated (a) if the hernia be bilateral; (b) if other hernias be coexistent; (c) if the hernia cannot be painlessly, completely and permanently kept reduced; (d) if organs other than the uterine appendages be also present in the same hernia-sac; (e) if the wearing of a hernial truss causes pain or aggravates the symptoms; (f) if the patient has to be subjected to a general anesthesia for an operation of election; (g) if the patient is exposed to pregnancy.

—Heineck.

# Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

DR. John B. Murphy was right when recently he said that internal medicine was more important than surgery, and that, if he were a medical student today, he would take up the specialty of internal medicine. Murphy is right in this, as he usually is in everything else.

Medicine has kept pace with the advances of surgery; in fact, surpassed them. Through its complete development, the germ-theory has ceased to be a mere working-hypothesis, but has become a demonstrated fact. The science of bacteriology, which came into existence, as the youngest of the biologic sciences, has accomplished more for medicine within four decades than all the other branches combined have been able to accomplish in four centuries; it has done away with speculation, and has for all time established experimental research as the final court of appeal. Only through medicine has surgery been able to make its most definite progress.

Therapeutics—the treatment of disease—has kept in touch with our knowledge of pathology. We have arrived at a more intelligent knowledge of drugs and their uses. We have thrown away hundreds of the old-time drugs and discovered new ones in their stead. But, most important of all, we have learned that the most potent remedy for good often is the one unused; have learned how to discriminate and divide up our work and give our patients the technical skill of the surgeon, oculist, aurist, laryngologist, neurologist, and other specialists, and also how to use nature's simplest remedies and accept fully the strongest thought of Hippocrates—the importance of climate and diet.

The new century gives us the cue to the medicine of the future, for it suggests that, since we know the true cause of disease, we should direct our efforts toward eliminating this cause and developing in our patient a power of resistance against it.

The secret of the future of medicine that is to give us ideal men and women, physical, mental, moral, is a true knowledge of child-life—a complete grasp of the rights and interests of the babe, not only from the beginning of its existence, but from, and even before, its conception; and if parents and physicians both do their duty it should be started right along the lines of nutrition, digestion and growth. Then, if no interruption be allowed in these important functions, no serious disease can follow.

Surely, the definite demonstration made by the worker in pediatrics, or the diseases of child-life, gives us a cue for the management of all classes of people, from the cradle to the grave; for men and women, no matter what their age, "are but children of a larger growth."

How far we have progressed! 'Tis but a few decades since the people in the grasp of pests had recourse to prayer and fasting, instead of properly directing their energies to the problems of personal, domestic, and municipal cleanliness. It seems incredible, too, that but short twenty-five years ago city-dwellers were engaged in drinking water from wells in close proximity to cesspools and sewers.

But, though much has been done, much still remains to do. Medicine of the future is preventive medicine. The best time to cure a disease is before it occurs. We are just beginning to know what sanitation and preventive medicine mean.

Thanks to the great alienists Pinel and Tuke, and others like them, patience, gentleness, and scientific treatment have taken the place of brutality and chains in the treatment of victims of disease of the brain. Now the insane, the feeble-minded, the deaf and the dumb and the blind are managed to their best advantage; and may we not hope that those other victims of degeneracy and disease

the criminal classes, soon will be treated, cared for and cured rather than punished, and that our workhouses, jails and penitentiaries cease to be schools and breeders of crime?

Let us follow the advice of Dr. Norman Kerr. "Deal with the inebriate as we have successfully dealt with the maniac. Frown not on him as a hardened criminal. Remember he has fallen by the power of a physical agency which has crushed to earth some of the noblest and most gifted. Treat him as a patient laboring under a baffling and inveterate disease and amid many discouragements. Such a measure of success will follow our true curative treatment as will gladden our hearts as men, while it may attest our skill as physicians."

In line with this is the idea that in our institutions for the poor we should adopt methods and systems which will make the inmates useful, that we devise means whereby all but the incurables shall give service for service rendered and thus be rescued from the depressing consciousness that they are paupers.

What we have learned of tuberculosis alone, of the conditions which favor its spread, of the value, in this and other ailments, of fresh, clean air, sunshine, pure food, regular living, makes us look back to the very recent past, its fads, fallacies, quack-medicines, Christian science and other isms, with the same wonder with which we regard witchcraft and other superstitions of earlier ages.

A recent writer said that, if cleanliness be next to godliness, we surely are in need of sanctification and a new evangelist to preach the gospel of cleanliness and to inculcate the value of the ounce of prevention. The medical profession will continue to teach the people that cleanliness is godliness; that exercise not only means strength, but health; that nutrition is essential to growth; and that elimination, the ridding not only of our homes and cities of filth, but of our bodies as well, is essential to a successful life and a good moral character.

More legislation certainly is needed, and let us hope that it will be realized—that a department of public health will be organized, with headquarters at Washington, the head of which will be considered of at least as great importance as those who preside over the departments of agriculture, war, navy, money, and the postal service, and will be given a

seat in the President's cabinet; and that there will be branches of this department in every state as nearly related to the central government as the post-offices in the various states, resulting in the uniform control of matters affecting the health of the people and regulating those who preside over the health of the home.

Under such legislation the time will come soon when scurvy, ricketts, and consumption will be as rare as leprosy, while typhoid fever in an epidemic form will be a disgrace to a community and reflect individually upon the cleanliness of a family and impair their social status; when there will be such guarding of food-products that it will cease to be as much as one's life is worth to buy things at random for the table. As when (as has been said by Wingate) "a George E. Waring devotes his trained skill to improving health, he will be paid as much as the sheriff or police justice, and not 'turned down' at the next election or forced to eke out his meagre salary by the bounty of his friends;" when he dies as a hero and at the post of duty, guarding the armies of his country and the nation against yellow-fever, he will receive the honors of the soldier, a monument which will rank with that, surely, of men who are honored, not for having saved lives, but because they destroyed them.

More and more will the world know, in this coming century, that a sound mind in a sound body, properly equipped and well endowed to enjoy all the beauties of the world, is greater than the wealth of the Indies. More and more will we know that the laws of health are higher than the secrets of trade.

The duty of the State in guarding the people against epidemics, against typhoid fever and tuberculosis, against all preventable diseases, is definite and distinct; and let us believe that the time is come when the world, the State and society will appreciate the fearful danger which confronts them in the propagation of venereal diseases, and efficient measures will be taken to stop this scourge. The number of innocent victims increases daily, and a serious consideration is, that this corruption is penetrating into strata of society where formerly it was but rarely seen.

The time has arrived when physicians should throw aside all restraint when dealing with this question. Fathers, mothers, sisters, brothers, and all others should be informed, and this information should be in the plainest



language. The minister and the priest should aid the doctor in this praiseworthy undertaking. The doctrine should be inculcated into the young of both sexes that freedom from this awful syphilitic taint should exist before marriage could be thought of.

Upon this declaration rests the hope of the State as well as of families, for neither good soldiers, good citizens nor good husbands can be had with tainted blood. And tuberculosis should be included in this question, and we should brush aside maudlin sentimentality and false delicacy, if we would stop the spread of these sister scourges.

It is not honorable on the part of our sons to put themselves in a condition where they are a menace to those whom they marry, and we should explain to our daughters that they should avoid the man who is not a perfect specimen of physical, mental, and moral manhood, as they would avoid a demon or a deadly poison. We should insist that it is vulgar, indecent, and brutally unkind for anyone to marry who is not in perfect health.

The battle against disease and death can end only in relative failure if legislative action alone is to be relied upon. The great mass of the people must become willing and active helpers, and the fathers and mothers of the land must learn how to maintain the healthfulness of their homes, and the moral blindness of selfishness and ignorance must give way to the highest and purest aspirations.

The time is near at hand when the family or individuals will not wait until they are seriously ill before sending for their physician, but will carefully and thoughtfully select their medical adviser; and that not for his attractive personality, his prominence in church and secret societies, not because he is a trimmer and willing to walk their particular chalk line; but will be chosen for the reason that he is physically, mentally, and professionally well endowed, and he knows his business. After selecting such a one, he will be truly their medical counselor, and they will call upon him at regular intervals during the year to make proper examinations and take stock physically, as it were, and direct their habits of life to conserve their best health.

As the intelligent and conscientious attorney now has charge of his client's legal affairs, to help him avoid litigation and keep him out of court, so will the medical counselor of the

future guard his patients, help them to maintain health, conduct them along the lines of their physical wellbeing, so that they can do their best work and live long, useful lives, demonstrating in their results the truth that every individual born into the world, if properly looked after, should be a useful citizen of the State for not less than a hundred years.

When love is born in us, that is the birth of Christ. When love is born in us we get all goodness; so, anthropomorphically, on the twenty-fifth of December we receive presents from our friends. The spirit that is, or is supposed to be, behind those presents is high. The presents are too often low, so childish is the human family. There is strife rather than peace and good will over them. It is not maintained that if there had been no presents there would be no strife. There is something more. And that something is the birth of Christ in the heart. That is the real Christmas. It may not bring us all the *things* that the world calls good, but it will bring us joy, a joy that is higher than things, and unrelated to them.

#### OUR ANNUAL INDEX

According to our custom for several years past, we have not included in our December issue the annual index of the current year. Not only does this arrangement permit us to give a larger amount of reading matter to our subscribers, but it also gives us time to elaborate the index with greater care, thereby enabling us to present one which is well-nigh perfect when finally completed. The index, as now prepared, provides a veritable bibliography of the therapeutic literature of the year.

The index for 1913 is now practically complete, and we hope to have it ready for mailing by the time this number of *CLINICAL MEDICINE* reaches its readers. We consider it well-nigh indispensable, and we therefore urge every reader who desires a copy to let us know at once, by postcard. The index is supplied absolutely free, but we do not send it to every reader because of the very considerable expense which that would entail and the time required in getting it ready. However, we hope that very many of our readers will ask for it. If you want it, send the postcard at once.

# Among the Books

## HIRSCHMAN: "DISEASES OF THE RECTUM"

Handbook of Diseases of the Rectum. By Louis J. Hirschman, M. D., lecturer on rectal surgery, Detroit College of Medicine. Second edition, revised and rewritten. St. Louis: The C. V. Mosby Company. 1913. Price \$4.00.

We are not surprised to see this work by Hirschman so quickly passing into a second edition. It deserves it. It is, in fact, one of the best books that The Mosby Company puts out. Moreover, it has a distinct place in medical literature.

It is all very well for the general surgeon to assert and reassert that the rectum belongs in the pale of general surgery; the fact remains that general surgery is neither doing anything worth while in this branch of work nor telling us what may be done, and we are obliged to turn to the rectal specialist for information and progress in the subject. The truth is, if it had been left to the general surgeon, rectal surgery would still be a very crude affair. Its wonderful development we owe to men like Hirschman, and to books like the one we are considering.

Incidentally, we are glad to find that the author is such a strong advocate of local anesthesia for rectal work. This will tally with the personal experience of most of the readers of *CLINICAL MEDICINE*. We recommend Hirschman's excellent handbook to all general practitioners. They will find in it that which they cannot find in any general textbook of surgery.

## STARR: "NERVOUS DISEASES"

Organic and Functional Nervous Diseases: A Textbook of Neurology. By M. Allen Starr, M. D., Sc. D., professor of neurology, Columbia University, New York. Fourth edition, thoroughly revised. New York and Philadelphia: Lea & Febiger. 1913. Price \$6.00.

The author has taken advantage of the demand for a new edition of his work to introduce a different and, in our opinion, improved

arrangement of the subject-matter, one that will prove of special advantage to the student of neurology. He has divided his matter into four sections. The first section sets forth the general aspects of neurology, together with methods of examination and diagnosis; the second deals with organic diseases in detail; the third, with functional diseases (so-called); the fourth discusses disorders of the sympathetic nervous system. The latter, by the way, is a phase of neurology lamentably neglected, if not positively ignored, in the majority of textbooks.

Thirty years of practice in diseases of the nervous system has brought to the author a large and varied experience, out of which he writes for the direct benefit of those who read his book. This personal viewpoint accounts for many of the author's conclusions that at first blush may seem a little more definite than the status of the subject would warrant. We are by no means disposed to criticize the work on this score; on the contrary, we believe it adds to its clinical value. The borderland character of nervous disease is fully recognized, and surgical methods of treatment are given their proper evaluation.

## HERTZLER: "TUMORS"

Treatise on Tumors. By Arthur E. Hertzler, M. D., Ph. D., associate professor of surgery in the University of Kansas. Illustrated with 538 engravings and 8 plates. Philadelphia and New York: Lea & Febiger. 1912. Price \$7.00.

This is a subject which we have always with us. Presumably we shall never get to the end of classifying, reclassifying, and (as Kipling would say) tre-classifying tumors—at least, not until we know considerably more about them than we do at present. For the time being, about the only classification we can attempt of tumors is a clinical one; and that is continually shifting, as our meagre knowledge of their nature and etiology undergoes real or fancied progress. After all, that is, for the present, the most important aspect of the subject. To be able to recognize tumors properly, and thus to exercise

good judgment as to their prognosis and treatment—that is the paramount necessity of the practitioner, no less than of the surgeon.

And this is what Hertzler's book is designed to teach, and with considerable exhaustiveness. It is an excellent work, and shows large preparation and careful work. There are, of course, two phases of tumor pathology and diagnosis: namely, that which pertains to the tumor itself, and that which concerns the regional relationships of the neoplasm. Both of these phases are given adequate consideration in Hertzler's treatise. The illustrations constitute an important part of its didactic value.

#### BROWNING AND MCKENZIE: "SYPHILIS"

Recent Methods in the Diagnosis and Treatment of Syphilis. By Carl H. Browning, M. D., of the University of Glasgow; and Ivy McKenzie, M. A., B. Sc., of the Western Asylums' Research Institute, Glasgow. Philadelphia and New York: Lea & Febiger. 1912. Price \$2.50.

Since the demonstration of the specific organism of syphilis in 1905 and the discovery of the serum reaction by Wassermann in 1906, the map of syphilis has undergone a complete change, both in its diagnostic and in its therapeutic aspects, to which the introduction of salvarsan by Ehrlich in 1909 has contributed an important factor. Naturally, there has grown up, in that period—and there still is growing—a mass of literature around these new conceptions of the subject, of an original, experimental character. Hence, every contribution to this sort of literature, provided it be earnest and genuine, must be heartily welcomed, as helping to clear the way to a definite understanding of the true status of affairs.

The book under review is one of the most thorough and the best-ordered of all the reports we thus far have seen—at least in the English language—upon the new pathology, diagnostic and therapeutics of syphilis. Not an inch of the ground has been overlooked, not a difficulty sidestepped. The authors must have made an exceedingly thorough search of all the available literature on the subject, in addition to doing a large amount of research and experimental work on their own account. Most invaluable conclusions are reached in regard to the salvarsan treatment of the disease.

The book is one which the reviewer can not well summarize or can even quote from with

any degree of satisfaction. It must be read in whole in order to be appreciated. It is well worth such reading.

#### DEAVER: "APPENDICITIS"

Appendicitis: Its Diagnosis and Treatment. By John B. Deaver, M. D., Sc. D., professor of surgery, University of Pennsylvania. Fourth edition, thoroughly revised. P. Blakiston's Son & Co., Philadelphia: 1913. Price \$4.00.

The brief title, as cited above, gives but a poor idea of the scope and nature of this classical work. For, this treatise deals with every conceivable phase and aspect of the appendix and its diseases, including history, anatomy, clinical etiology, pathology, symptomatology, diagnosis, prognosis, treatment, operative technic, complications and sequels of disease, and much more, and all in the thorough, masterful fashion that is characteristic of the distinguished author.

The recent advances in our knowledge of peritonitis in general, and of appendical peritonitis in particular, have made necessary an entire revision of virtually all of the various phases of the subject; and each has, in this last edition, been brought into harmony with present prevailing views. The section on pathology in the previous edition was from the pen of the late A. O. J. Kelley, and Doctor Deaver states in his preface that he has aimed to make as little change in this section as possible; however, accuracy in a work of this kind must always transcend sentimental regard for departed authorities, and no one will quarrel with the author for having made whatever alterations and additions he may have found necessary in Kelly's work.

We heartily commend the evident determination with which the practical, clinical aspects of the subject have been kept in mind, and the injection into the work of the author's personal element. These things certainly greatly enhance the value of the book.

#### JONES: "MEDICAL ELECTRICITY"

Medical Electricity: A Practical Handbook for Students and Practitioners. By H. Lewis Jones, M. A., M. D., of St. Bartholomew's Hospital. Sixth Edition. Philadelphia: P. Blakiston's Sons & Co. 1913. Price \$4.00.

There is a marked difference between this edition of this book and the previous one. In the interval that has elapsed there has been a correspondingly noticeable change in the status of medical electricity; which, as we

all know, has been slowly, but surely, "finding itself" and has gradually swung into its proper place in therapeutics. Principally there has been a marked clearing up of the former confused ideas concerning the mode of action of electricity upon the body; we have abandoned the many wild and extravagant theories which for several years invested the subject with almost a garb of charlatanry, and have at last settled down to a very quiet, rational interpretation of electrotherapeutics.

It is now pretty well agreed that electrical action, so far as the body is concerned, is all resolvable into ionic or thermal effects. Usually these are combined in our various procedures; and upon this very reasonable basis the author now constructs a definite and practicable system of electrotherapy, one that is sure to appeal to the most scientific and conservative among us.

Radiography does not receive any extensive treatment, the author being of opinion that this subject has become altogether too large to admit of adequate consideration in a volume of this size and scope; but expresses the hope that "sufficient has been given to lead beginners to the stage at which special works must be called for." Altogether, the book is characteristically English, which means that it is conservative, clear, and practical.

#### "INTERNATIONAL CLINICS"

International Clinics. A quarterly of illustrated clinical lectures and original articles. Edited by Henry W. Cattell, A. M., M. D. Series xxiii, Volumes 1 and 2. Philadelphia and London: The J. B. Lippincott Company. 1913. Price, per volume, \$2.00.

As a rule it is a rather invidious thing to attempt to select from a work of the kind under consideration any specific portion for commendation over the other contents of a book. In the case of the first volume of the present series, however, we are confronted by no such embarrassment. The editor's review of medical progress during 1913 is easily the *pièce de resistance* of this volume. It is a capital résumé of all that was "doing" in medical science and practice throughout the year, selected and presented with excellent discrimination. For the rest, we should be tempted to pick out the articles on psychological and mental subjects as offering, perhaps, the most interesting reading. However, it is all good and useful stuff.

Volume 2 is full of equally excellent matter, among which we may, perhaps, be permitted to make special mention of a most timely

article on the therapeutic indication for anti-toxins, serums, and vaccines. There also are in this volume two interesting and instructive reviews, one on the past year's fracture work at the University of Pennsylvania dispensary hospital, the other on the medical application of radioactive elements. These are illustrative of the thorough fashion in which the editor and collaborators of this series of reviews are keeping pace with the progress of modern medicine and presenting it for the benefit of their subscribers.

#### HOOKE: "CHLORIDE OF LIME IN SANITATION"

Chloride of Lime in Sanitation. By Albert H. Hooker, Technical Director, Hooker Electrochemical Company. New York: John Wiley & Sons. 1913.

A method of water purification which has really revolutionized our method of preventing the dissemination of disease through water supplies was hit upon in 1908 by Mr. T. A. Johnson, of New York City, who was called upon to remedy serious trouble in the purification of the water used in the care of livestock at the Chicago stockyards.

Under legal pressure a method had to be devised for purifying the water of that malodorous stream, Bubbly Creek. This water had been filtered and used to water stock, but was still loaded with bacteria and was considered dangerous to the health of the animals using it. Happily, Mr. Johnson hit upon the idea of treating this water with calcium hypochlorite, or, as it is commonly called, chloride of lime. He was surprised to find that even when this chemical was used in exceedingly minute quantities it destroyed the bacteria and actually rendered this Bubbly Creek water more safely potable than that used by the human residents of the city.

Since Mr. Johnson's discovery, this method of treating drinking waters has been adopted by many of the largest cities in the country. For instance, the water of New York City, Cleveland, Cincinnati, Minneapolis, Des Moines, Jersey City, and hundreds of other communities, is now being treated with hypochlorite. By the use of this substance epidemics of typhoid fever have been repeatedly brought to an end. The quantity of chloride of lime required has been found to be exceedingly small, so small in fact that free chlorine is never detectable in the water, and its taste and odor are unaffected.

While different cities use different quantities of the hypochlorite, the average is ap-

proximately that used in the Croton Reservoir for New York City, this quantity being about 16 pounds per million gallons of water. In other words, to quote one of the statements in Mr. Hooker's book, "Three grains of a practically harmless substance will kill the myriads of germs contained in a barrel of water."

Chloride of lime can be used not only in treating the city water supplies, but it may also be employed for private supplies. It has become, therefore, a most powerful means of preventing disease, and not typhoid fever alone, since according to the well-known Hazen theorem, the mortality from typhoid fever is directly proportionate to that from other diseases. Thus, our efforts to arrest the spread of typhoid fever prevent disease generally.

The importance of chloride of lime in sanitation in the light of these facts becomes very apparent. Certainly every physician should be familiar with this commonplace and inexpensive substance and should be prepared to use it where the drinking water is of doubtful quality. We earnestly advise the purchase of Mr. Hooker's book, which contains an enormous fund of information of vital importance to physicians in general and health officers in particular.

#### SCHROEDER: "INSURANCE MEDICINE"

Insurance Medicine. Suggestions to Medical Examiners. By Henry H. Schroeder, M. D., Medical Director of the New York Mutual Life Insurance Company. New York: Wm. Wood & Co. 1913. Price \$2.00.

This little book represents the reprinting, in volume form, of a series of articles from the author's pen which were originally published in *The Medical Record*. The purpose of the author is a very praiseworthy and timely one. It has been for some years an open secret that the relations between the insurance companies and the medical examiners in the field have been, to say the least, somewhat strained—and that, not merely upon questions of fee, but as between the home medical departments and the field men themselves upon questions of prognosis and risk. It was with the object of eliminating some of these differences and of drawing the two departments into closer understanding that Dr. Schroeder contributed these articles to *The Medical Record*, and now publishes them in book form.

Presumably almost every medical practitioner becomes, at some time or other, an examiner for life insurance risk; and it is

much more than presumable, it is quite certain, that in performing this function he finds himself confronted with a totally different problem than that which faces him in the ordinary professional examination of his own patient. Unquestionably the greater part of the misunderstanding referred to results from this unsophistication on the part of the physician in insurance examination and prognosis. Dr. Schroeder has made the way very plain for him in this little book; and we earnestly recommend that every physician possess himself of it as a working exigesis, a field-manual, to guide him in insurance practice.

#### OTT: "A TEXTBOOK OF PHYSIOLOGY"

A Textbook of Physiology. By Isaac Ott, A. M., M. D., Professor of Physiology in the Medico-Chirurgical College of Philadelphia. Fourth Edition, revised and enlarged. F. A. Davis Company, Philadelphia. 1913. Price \$3.50.

Perhaps there is no one of the medical sciences which presents such a continual state of flux as does physiology. Indeed, together with pathology, it may be said to constitute the determining factor in the marvellous advance made in recent years in the whole science and practice of medicine. This mobile quality imposes upon the author of a textbook on the subject a two-fold difficulty—that of keeping pace with the swift advances made from year to year by physiologic research, and at the same time of holding down his text to the reasonable limitations of the students' capacity without omitting any essential points. No doubt the conscientious author feels the second half of the task to be harder than the first. The first, at all events, is merely a matter of labor; the second demands discrimination and judgment.

It is in this discriminative faculty that Doctor Ott's book excels. Its chief title to commendation lies in its avoidance of that tendency to cumbersome, overwhelming bulk which unfortunately characterizes so many otherwise excellent textbooks of physiology in these days, and which simply bewilders and paralyzes the student. Without sacrificing anything essential in the advance of the subject, Doctor Ott has wisely trimmed the enormous mass of data down to manageable dimensions, and arranged them in orderly fashion, so that the student, instead of being oppressed by the bigness of the subject, is attracted by its clearness. We predict that medical schools will come back more generally to this epitomized, discriminative type of book.



# Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERY 5970.—“The Noguchi and Wassermann Tests for Syphilis.” C. B. M., Missouri, asks, “Is there a preparation that is rubbed upon the skin, to diagnose syphilis?”

To the best of our knowledge, the existence of syphilis cannot be revealed by merely “rubbing” any substance upon the skin. Mercurial inunctions are used considerably for their remedial effect, but, of course, could not be considered diagnostic, except through the improvement likely to follow in syphilitic cases.

It is well to remember that syphilis is distinctly a disease of stages, which may be divided as follows: (1) Exposure. (2) Incubation. (3) First stage, that of initial lesion (chancreoid). If a chancre exists, the individual is syphilitic. (4) A second period of quiescence. (5) The second stage, appearing at any time from three weeks to six months after the initial lesion, or it may never appear, or appear but not be noticed. (6) The third period of quiescence follows. Then (7) tertiary symptoms manifest themselves, destructive changes taking place in various tissues of the body.

Where the existence of lues is suspected and not definitely known, a Wassermann or Noguchi skin test may be made.

Luetin, an emulsion of killed spirochetæ pallidæ, is injected into the skin and produces a reaction indicating the presence of lues. This (the Noguchi) though not as definite, is a more simple test than the Wassermann.

A Wassermann test must be made for you. If you can obtain a supply of luetin (which we doubt), you can make the injection yourself. Merely sterilize the skin of the upper arm with an alcoholic solution of corrosive sublimate, then inject 0.05 Cc. intradermally. If the injection is properly given, the epidermic layer is raised in the form of a bleb. Reaction develops in from twenty-four to forty-eight hours. It may be papular, pustular or “torpid,” the original macula fading in three or four days, to reappear in pustule form ten days later. Negative react-

ions fade in one or two days; positive ones disappear in from a week to ten days.

Bear in mind that secondary cases that are or have been under mercury or in which clinical signs of syphilis are absent may show a severe reaction; in tertiary and hereditary forms, the reaction is strikingly positive.

The correct technic for collection and preparation of serum for the Wassermann test is as follows: With a sterile syringe withdraw from the median basilic vein 5 or 6 Cc. of blood. Place this in the test tube and replace the cotton stopper. Set away in a slanting position until the blood has clotted. If you slant the test tube at an angle of about 45 degrees, the clot will adhere to the side of the tube, the serum collecting at the bottom.

Now with a sterile syringe withdraw enough of the clear serum to fill a small ampule. This serum must be free from red blood-corpuscles and must not be tinged with hemoglobin; it should be clear yellow serum. Then, instead of replacing the cotton in the narrow neck of the ampule, simply hold the end of this narrow neck in the flame of an alcohol-lamp or gas jet and seal it. As soon as the tip of the ampule has melted sufficiently thoroughly to seal it, place the ampule in a mailing-case and dispatch to the laboratory at once.

If the patient has been under treatment, it is advisable not to make a test during this period; otherwise, even if the patient has lues, the reaction will be negative. Therefore, if you wish to determine whether or not the patient is cured, it is necessary to withhold all antisyphilitic treatment for four or six weeks before sending the serum for a test.

QUERY 5971.—“Paraffin-Injection Treatment of Hernia.” N. J. H., Nebraska, has read a little about and seen more of paraffin injection for rupture, and has continuously observed some individuals who have received this treatment. Now he wishes to learn more about this method and to be referred to someone able to explain the full technic.

In reply, this writer will say that he has had opportunity to observe the procedure of two of the most successful advertising "specialists" treating rupture by the paraffin-injection method, and is constrained to believe that the disadvantages of the method materially outweigh its good points. In certain carefully selected cases, a really skilful operator may, perhaps, do satisfactory work, and without question there are hundreds of men doing manual labor throughout the country today who have been "cured" of their hernias by the injection of paraffin. But even so, the fact that a foreign body is encysted in the tissues and may at any time cause trouble must not be lost sight of.

The operation when performed by an inexperienced or careless physician is an extremely dangerous one. More than one death from thrombosis has occurred on the table or shortly after injection. Gangrene or paralysis of the extremities has been observed in several instances, while, as doubtless you are aware, a number of individuals have been compelled to apply to surgeons for the removal of the mass of paraffin, which, having become displaced, has caused intense pain and discomfort.

The originator of the method that possesses the most merit experimented for several years endeavoring to perfect a special syringe, and he now injects a sterile modified paraffin at a definite temperature. This writer has watched him work on several occasions and, although there followed some unsatisfactory experiences, this man has been successful in the majority of cases. It is hardly to be expected, under the circumstances, that he will reveal his "full technic." At any rate, in these days, when any hernia can be so quickly and positively cured by operation, we should hesitate a very long time before injecting paraffin.

QUERY 5972.—"Wanted: A Bacterin for Adenitis." B. C. B., South Dakota, wishes to know what bacterin would prove curative in an adenitis of the salivary and cervical glands which resists regular treatment. "The glands," he writes, "are very hard and show no tendency to suppurate. They are not tuberculous and came on following a severe attack of tonsillitis. I have several such obstinate cases among young children, but who apparently suffer no constitutional effects."

As you can readily understand, doctor, before we can recommend a bacterin for use in adenitis of the salivary and cervical glands,

we must be able to identify the infecting microorganisms.

It would be well to examine the nose and throat very carefully; the tonsils should receive particular attention, and if there are any crypts a specimen of the contained material should be forwarded to the pathologist. In many cases, adenoids exist; and always the fauces, pharynx, and tonsils are important channels of infection. It must not be forgotten that adenoids are not always readily discovered; hence, the nasopharynx must be carefully explored.

Usually in simple nonsuppurative adenitis, the inflammatory condition is incited by the absorption of staphylococci or streptococci; occasionally the micrococcus catarrhalis and the pneumococcus are responsible.

Chronic adenitis consists in a simple hyperplasia of the lymph-nodes. It is rarely observed after the fifth year; the most frequent subject being children of the lymphatic diathesis. The glands upon both sides of the neck are usually involved, and more often a group than a single gland. The degree of swelling is not great. There is no pain or constitutional symptoms. Tendency to supuration or caseation is entirely absent. Almost invariably hypertrophy of the tonsils or adenoids, or even both, is present.

Little or no benefit results from local applications. As we have already pointed out, the causative condition should be looked for and discovered. Syphilis and tuberculosis should, of course, be excluded.

Under the circumstances, it is not likely that any bacterin will prove beneficial. Removal of adenoids or hypertrophied tonsils and exhibition of antiscorbutic remedies with arsenic iodide in comparatively full doses as alternant would probably cause the prompt disappearance of the indurations.

QUERY 5973.—"Onychosis?" O. L., New York, has under treatment a patient presenting a "syphilitic lesion and breaking down of the finger-nails which defies all ordinary treatment." He desires "a plan of treatment, both local and constitutional."

We regret that you did not give us a clearer idea of the conditions you have to contend with; you simply speak of a "syphilitic lesion with breaking down of the finger-nails."

Now, there may be no connection whatever between the luetic taint and the nail disorder, although atrophic nail changes have followed the continued use of mercury or iodine. Sometimes scleronychia is observed in syphilitic individuals, when the nails become thick-

ened, inelastic, hard, rough, and of a yellowish-gray color; also longitudinal furrows appear, and there is chipping or breaking of the anterior border. Also, onychosis frequently is of syphilitic origin; in which cases arsenic iodide internally or liquor arsenii compound (Barclay), alternated with calx iodata, will prove beneficial.

However, doctor, before venturing more definite therapeutic suggestions, we should like to have clearer clinical data. State the age of the patient, length of time he has been syphilitic, and character of treatment; describe carefully the condition of the nails at the present time.

—  
QUERY 5974.—“Rodent Ulcer in the Buccal Cavity.” H. C. S., Nebraska, writes, “Today there came into my office, a woman presenting a suspicious-looking growth, of about the size of a nickel, on the inside of her mouth. It is in front between the tongue and alveolar process of the lower jaw, looks raised and swollen, and it has been there over a year. Another doctor has been treating this patient for six months, who cauterized three times a week; but it was getting worse. I am mailing a few small specimens, preserved in dilute formalin, and wish you would tell me whether the growth is malignant or not, also make suggestions as to treatment. Would excision effect a cure or would the cautery be advisable?”

You have to do with a rodent ulcer. As you are aware, the special characteristic of this type is its steadily progressive spread. The margin is little, if any, elevated; or, as Stelwagon puts it, “the ulcerating feature is conspicuous, whereas the new-growth element is almost nil.”

Rodent ulcer is seldom observed in the buccal cavity, being rather a disease of the upper half of the face, especially frequent about the eyelids and the sides of the nose. Ulcus rodens may prove extremely destructive, extending deeply down as well as laterally. There is always the possibility of final glandular involvement and a change of type into a deep-seated, or papillary, variety of the disease.

You will readily understand, of course, that it is not an easy matter to use caustics effectively upon a lesion situated as you describe, between the tongue and alveolar process of the lower jaw. Still, it is very essential that the epitheliomatous tissue be thoroughly destroyed or otherwise removed. The surgeon would operate, while the dermatologist as a rule favors the use of caustics.

Electrolysis must be thought of—the small flat copper plate to be applied directly to the growth, using a current of from 5 to 20 milliamperes. The x-ray and the Finsen light also are advocated. The x-ray at the present moment probably is most in vogue; but the present writer regards it more as a supplementary measure. If the Finsen light is available, you might try it. Of course, you will have some difficulty in treating the affected area with either the x-ray or the Finsen light.

In this instance, it might be well to curette the area thoroughly and then apply caustic potassa. Arsenic pastes and pyrogallol are out of the question here, of course. Thorough excision of the ulcer, saturation of the patient with arsenic (alternating the triple arsenates with calx iodata and arsenic iodide, week and week about), and the application of equal parts of thuja and echinacea, on a cotton swab, to the affected area would, we believe, prove the best procedure.

Galvanocautery has been used, but the operation necessarily is painful (if thoroughly done) and the results certainly are not as satisfactory as those to be secured by thorough excision.

It might be well, however, to examine the girl carefully for syphilis, even though all circumstances would seem to exclude such a possibility. You do not describe the lesion fully enough to enable us to discuss the matter very intelligently, and the examination of a section would not enable us definitely to exclude syphilis. The location of this ulcer is rather peculiar, and a careful study should be made of it.

The aphthous ulcer generally shows as a yellowish erosion; still, an eroded mucous patch may have the same appearance. This writer has seen an ulcerated patch on either side of the frenum destroyed under a course of potassium iodide and careful painting of the ulcer with a 2-percent bichloride of mercury solution. Before operating, it might be well to try these procedures.

—  
QUERY 5975.—“Umbilical Angioma.” J. Z., Indiana, has under care a girl baby of 18 months who since birth has had a nevus or angioma of the umbilicus; it is gradually getting larger, and now resembles a ripe cherry and bleeds readily on being touched. The Doctor asks whether sodium-ethylate solution could safely be used here for cauterizing.

We should hesitate a long time before using any caustics whatever in a case like

this, and for various reasons. Tumors of the umbilicus, we need not point out, are not uncommon, and are usually of an inflammatory type—the granulomata of infancy and the papillary fibromata. The granuloma is sometimes called an umbilical fungus. It is absolutely necessary to distinguish it from an enteroteratoma, which latter is covered with mucous membrane.

Simple granuloma may be cured by cleansing with boric-acid solution or other mild antiseptic and then touching with silver nitrate; or, it may be removed with scissors and the wound dressed with dry gauze, moderate pressure being made to control oozing. Enterotomas require very careful removal. Connective-tissue tumors of the umbilicus are rare, especially the nonmalignant forms. Dermoid and sebaceous cysts can easily be removed under local anesthesia.

The main thing in the present case is, to be pretty sure of the character of the tumor. Capillary angioma, of course, may be treated with sodium-ethylate solution or carbon-dioxide snow. Cavernous tumors may be excised or destroyed by means of electrolysis or carbon-dioxide snow. Cirroid aneurysms, however, must be removed by careful and wide dissection. The case in hand evidently is not a capillary nevus, while, further, cavernous tumors are not found about the umbilicus; on the whole, we are inclined to believe that surgical procedure is called for here. Meantime, please note carefully the character of the tumor and the nature of its base, and report with greatest possible detail.

QUERY 5976.—“Action and Dosage of Coniine (Cicutine).” H. L. G., Illinois, impressed by our advice to give coniine to effect (watching results carefully), asks what amount can be taken daily with safety in a case of tremors, or paralysis agitans?

The predominant action of cicutine, it must be remembered, is paralyzant, at first of the extremities, then of the trunks of the motor nerves. The voluntary muscles are involved first, then those of respiration, next of the left heart, then the diaphragm; and finally fatal results may occur from asphyxia, the preceding dyspnea being accompanied by clonic spasms. If forced respiration is instituted, the action of the heart remains unaffected for a long period. Consciousness persists to the end.

Full doses of cicutine may produce vertigo, malaise, dilated pupils, tremors, weakness of the extremities and uncertain, vacillating gait. The rapidity of the pulse is first in-

creased, then rapidly becomes small and weak.

In moderate doses, cicutine causes tendency to repose or even slumber, softening of the pulse, diuresis, and diaphoresis.

Burggraave, who observed its action carefully, states: “It calms sensibility and contractility, regulates the circulation; the intravascular pressure and the animal heat are increased slightly; the respiratory mechanism is not disturbed.

Dosage necessarily will depend upon conditions present and the effect one desires to produce. For instance: in strychnine poisoning, coniine should be pushed boldly; in whooping-cough, minute repeated doses are indicated. The drug is indicated, of course, in paralysis agitans and in all nervous hyperesthesias, in chorea, convulsions, tremblings, and wherever it is desirable to sedate the motor nerves and control spinal irritability and exaltation of the reflex excitability.

Frequently it is essential first of all to correct the autotoxemia present. Bear in mind that the drug is rapidly eliminated, and for that reason it is advisable to push its administration until relief follows, or to the first signs of drug sufficiency.

QUERY 5977.—“Diffuse Chloasma.” H. M., Illinois, requests an effective treatment for brown skin covering arm and body. The discoloration he describes as a “fright,” and is of about two years’ standing. There is no eczema, no itching, nor annoyance. The patient is aged 25 years, the mother of one child, two years old; her health apparently is perfect.

It is really impossible—as upon reflection you can understand—to prescribe definitely for your patient afflicted with this diffuse chloasma. Treatment necessarily depends, in all cases of this kind, upon the etiologic factors. When the patches appear on the trunk, extremities, and so on, they are, as a rule, the result of some external agency, and only local treatment can possibly prove effective. The first thing to decide, therefore, is, whether you are dealing with the idiopathic or the symptomatic variety.

As the discoloration in question has existed for about two years and the one child of the woman is two years old, it probably is chloasma uterinum. However, this variety usually appears on the face, the forehead being the favorite site. In some instances, patches break out also on the breast, abdomen, and other parts. Usually this trouble is seen in women between the ages of twenty-

five and fifty; rarely in those younger; seldom after the climacteric.

Anemia, chlorosis, chronic indigestion, neurasthenia, nervous shocks or hepatic disorders may cause chloasma. We must not forget that the condition frequently follows the administration of arsenic.

Stelwagon claims that the pathologic process underlying chloasma is merely an accentuation in the physiologic pigment and apparently is under the control of nervous system. Recent observers call attention to the possibility of disease of the suprarenal glands occasionally being causative.

As a matter of fact, the disorder is pathologically similar to freckles: in the latter condition, we have a circumscribed deposit, while in chloasma it is patchy or diffused.

Chloasma uterinum usually is persistent. In those persistent cases in which no evident factor can be discovered, ovarian irritation or some disease of the uterus is to be suspected. For this reason, we suggest that you make a very thorough examination of your patient, paying particular attention to the pelvic organs.

The external treatment has been outlined by us in *CLINICAL MEDICINE* two or three times. Corrosive sublimate, hydrogen peroxide, lactic acid or an ointment containing white precipitate and bismuth subnitrate may be applied until exfoliation is secured. Solutions of corrosive sublimate should be applied several times daily, but discontinued just as soon as branny exfoliation begins. During this period a mild, soothing salve (cold-cream or borated vaseline) should be applied. The "next best thing" is salicylic acid. Should these fail, solution of hydrogen peroxide may be used, full strength.

The most effective internal medicines are alnuid and irisoid and small doses of leptandroid.

QUERY 5978.—"Persistent Uterine Contractions." M. F. M., Iowa, reports the case of a woman, 37 years of age, now pregnant for the fourth time, whose other pregnancies were normal; youngest child about 7 years old. She was released from the State Hospital for Insane one year ago. She has been having pains resembling true labor-pains for now five weeks; is confined to bed, very weak, without appetite, constipated, cathartics increase the pains; pulse is 80; blood pressure, 135; urine, 1010; no albumen or sugar; acidity 55; indican present

in moderate amount; tongue slightly coated. She says she has not slept much, on account of the pains, which are worse at night.

"Examination shows long axis of fetus at angle across mother's abdomen. Head appears to be in right iliac region (not over pubis) and back to right side of mother's abdomen. Uterus feels more angular than normal, development being more in left upper corner. Os quite high, open enough easily to admit index-finger. Membranes but not fetal head can be felt. Uterus contracts vigorously while being handled. Fetal heart can not be located. Mother thinks child moves a great deal.

"Patient had been under care of another physician (who has just left this location) and had received morphine hypodermically, which gave relief for a few hours each time. She was put on H-M-C modified q. s. to control pains (about 2 to 4 each twenty-four hours), and veronal compound at bedtime. Cascara compound for bowels and a mixture of pepsin and diastase after meals was also ordered. Patient much improved, but pains come on each day and she suffers a great deal, is very weak; takes a rather light meal regularly. Slightest palpation of uterus causes it to contract vigorously. Question: Can I hold this woman to full term?"

Now, doctor, what was the form and the cause of this woman's insanity? Has there, to your knowledge, been any marked disorder of the pelvic organs? Any possibility of uterine fibroma? Adhesions binding down the fundus? Is the woman stout or thin? What is her present mental condition?

What to do now? More or less acidosis undoubtedly obtains, and, so, free elimination is essential. Small doses of veratrine (gr. 1-300), with full doses of viburnoid and caulophylloid (adding lobeloid, if the uterine irritability does not readily disappear) also would seem advisable. We cannot see any definite indication for premature delivery.

You say, "head appears to be in the right iliac region, and back to the right side of mother's abdomen, the uterus feeling more angular than normal." From this, it would appear that you have to do with a moderate transverse position, that is, head to the right, back in front, or, the second position of Winkel. Under such circumstances, unless the position is changed, you are apt to get a shoulder presentation; then, naturally, you would not be able to feel the fetal head, nor easy to discern the fetal heart sounds.

You do not speak of any progressive dilatation of the cervix. Is there excessive or



normal enlargement of the abdomen? Can you not, by manipulation (bimanual), bring the head down and retain a proper position by the application of a binder and positioning of the patient?

The uterine irritability may or may not be due to the abnormal position of the fetus. We should endeavor to discover the position of the placenta. Place the woman upon her left side, keep the bowels freely open (not with drastic cathartics, but give compound licorice powder, or, better still, phenolphthalein compound (thalosen) and laxative salines; and make no more vaginal examinations than are necessary.

Of course, you must be prepared to deliver if the woman gets steadily weaker. Under such circumstances, we should dilate rapidly and do version, unless, of course, you have no difficulty in securing a vertex presentation.

We are inclined to think that the previous administration of morphine was a great mistake.

If there is an undue proportion between the size of the fetus and the uterine cavity, malposition would be expected. As you fully understand, controlling pressure exerted by the walls has a distinct effect upon the attitude and lie of the fetus. The fetus in its normal attitude has an ovoid form, as had the uterine cavity. The larger end of the fetal ovoid is composed of the breech; the small, of the head; the fundus constitutes the larger end of the uterine ovoid; the cervical portion, the smaller.

It is obvious, therefore, that, if the fetus is to take advantage of the close correspondence subsisting between its own shape and that of the uterus and so obtain the maximum amount of room, it must lie longitudinally, with the larger end of its ovoid in the larger end of the uterine ovoid. Under such circumstances, pressure is uniform.

In any other presentation, pressure varies over the different parts of the body; hence (unless you have a monster to deal with) with the head in the right iliac region and a modified transverse position, the extremities must be in the vicinity of the left cornus. It ought not to be difficult to modify this position and bring the head down.

It is possible that the uterine contractions which you speak of are due to undue pressure of the extremities on the uterine wall or to excess or absence of amniotic liquor.

Had we a clearer idea of all the conditions involved, we might be able to advise you more intelligently. With the facts at our disposal, however, we are inclined to advise against termination of pregnancy; definite indications for this seem to be absent. Were we in your place, we should, under any circumstances, call competent counsel.

If *accouchement forcé* is essential, it should be done while the woman is strong enough to endure the ordeal and before the child attains a larger size. It is reasonable to suppose that you may absolutely exclude extrauterine pregnancy.

If you have a copy of Jellett's "Manual of Midwifery" or any good modern work on obstetrics, note the illustrations showing the second shoulder presentation, back and front.

Bear in mind that the greater the number of children a woman bears, the more lax becomes the uterine wall and the less pressure is exerted upon the fetus. The fact that this woman has had three normal births would lead us to exclude uterine malformation; but an intrapelvic growth, cystic condition of fetal organs, or collection of fluid in the peritoneal cavity, or abnormal formation of fetus itself (monstrosity) may all favor the occurrence of transverse position and ultimate shoulder presentation.

